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A SUMMER TRIP AMONG THE WESTERN
INDIANS.*

(THE WANAMAKER EXPEDITION.)

BY STEWART CULIN.

CHAPTER I.

IOWA : SAC AND FOX ; WYOMING : JASPER QUARRY, WIND
RIVER RESERVATION, SHOSHONI AND ARAPAHO.

On the seventh of last May, in company with Dr. George A. Dorsey, of the Field Columbian Museum, I left the city of Chicago for a summer trip among our western Indians.

Dr. Dorsey, who had had much experience in field collecting, had carefully planned our route. We proposed to travel across the continent to San Francisco, stopping at the reservations along our way. Then to go northward up the Pacific Coast to Victoria, and, returning by the "Great Northern," visit the Sioux in Montana and Dakota. A circular ticket, purchased in Chicago, covered the main lines of our journey.

Our first stop was at Tama, Iowa. Here, within three miles of the town, surrounded on all sides by rich and highly cultivated farms, there lives a fragment of the great Sac (Sauk) and Fox nation, whose survivors are now divided between Iowa and Oklahoma. Notwithstanding their location, these Indians are

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among those least affected by contact with our civilization. They remain pagans. They have rejected Christianity, and at present the missionaries have withdrawn from the reservation.

The Indians were moving from their winter houses to their summer homes at the time of our visit. The former are oval or elliptical in form, from ten to twenty feet in length and eight to ten feet high in the centre, and consist of hoops of saplings, covered with rush mats and having blankets spread on the ground. The summer shelters are frame structures about forty feet long and twenty wide, with corner posts supporting the roof, and covered with poles, bark and boards. A board platform built along the wall on both sides, serves as a seat during the day, and as a bed at night. There was a dog-feast in one of the long-houses on the day of our visit, and we could hear the continuous low drumming and the songs, but the principal men were not to be seen. A few single old men, blind and decrepit, sat on the platforms in the long-houses, their medicine-bags hanging from the rafters above them. One, whose gray hair was cut close, except for a crest or scalp-lock down the middle, offered to sell us an otter-skin collar with grizzly-bear teeth.

These feeble creatures, with strangely wrinkled faces, expressive of patience and suffering and more of life's experience than falls to all the collected multitude of our modern towns, were once the tribal leaders and are still the repositories of the tribal secrets and traditions. One by one, they will be carried to the little graveyard on the hillside and buried with their precious packs, and all their wealth of curious knowledge will be lost to the world forever.

The younger generation wear moccasins and blankets, and some tie their hair with colored worsted headbands. In general, there is that shabby mixture of white and Indian dress, fragments of native finery with cast-off garments of civilization, that everywhere characterizes the existing Indian. They are shrewd at a bargain and the women are constantly employed in making beaded bags, garters and moccasins for sale to the whites and for their own use and adornment. These Indians appeared extremely robust, healthy and intelligent, and to have suffered less from the degrading influences of white contact than any we encountered.

Returning, we visited the graveyard on the hill overlooking the prairie. Our guide, an English-speaking Indian, restrained, no doubt, by superstition, declined to accompany us. The graves, crowded in a small enclosure, are of two kinds: one a square crib of logs filled with earth and tied with cords, resting upon the surface, and the other a wooden penthouse, placed, presumably, above a grave dug in the earth. At the head of certain graves was a post, consisting of a sapling, stuck butt uppermost in the ground. The top of this was painted red. On other graves there rested a baby's cradle-board. Over one, a ring or wreath of dried grass was tied to a sapling. Before others the skin of a small animal, a badger (?) with a ribbon tied around its neck, was stretched out on the ground. According to the last report of the Commissioner of Indian Affairs (1900), there are 385 Indians upon this reservation; Sac and Fox and a few Pottawottomi and Winnebago occupying an area of four and a half square miles. A sturdy, independent, self-respecting people, they gave me a most favorable impression of Indian character.

Omaha was our next stop on the road westward. Here we inspected a collection of Indian objects, chiefly Sioux, loaned by Patrick Ryan, in the Public Library. The next morning we arrived in Cheyenne.

This once notorious frontier town has undergone a strange transformation. The cowboy no longer rides with a flourish through its quiet streets, and the click of the roulette wheel and the rattle of the revolver are about as infrequent as in our own city. The State museum, consisting chiefly of the remains of Wyoming's geological exhibit at Chicago in 1893, is installed in rooms in the Capitol. We drove out to Fort Russell, which looked shabby and neglected, the flag in shreds and everything forlorn, the troops, save one company, having been withdrawn for service in the Far East. Cheyenne appears at a standstill, waiting for another boom.

Dorsey had information concerning an unexplored Indian jasper quarry, near the head of Muddy Creek, in eastern Wyoming, and here we proceeded from Cheyenne, going by rail to Hartville Junction, and thence to the new boom town of Guernsey, whence we drove to the quarry. Some dozens of unpainted frame houses on the open prairie, a railroad sta-

tion, and a vast gang of laborers engaged in building a railroad embankment were all that was visible of the new metropolis, in which corner lots were being offered for sale at metropolitan prices. We were to be guided to the quarry by two miners who lived on a ranch in Whalen's Cañon, some eight miles from the city. A boy with a handsome double-seated phaeton and pair met us at the station to drive us to their cabin. We passed through a prairie-dog village on the way, and once our driver alighted and killed a rattlesnake that coiled itself threateningly in the road before us. At the end of some eight miles, we left the main cañon, with its sage bush and cactus and fringe of pale green cottonwood along the bank of the stream in the ravine, and entered a side cañon leading to our destination for the night, a solitary ranch in a cleft of the hills. Our hosts and prospective guides to the Indian quarry, Messrs. Lauk and Stein, were interesting characters. They had taken up their land some nineteen years ago, when wandering bands of Sioux frequently crossed the cañon, bear and antelope abounded, and the trees still bore their burdens of Indians buried amid their branches. Stein, in particular, was very bitter against the encroachments of civilization. He rejoiced, he said, in nature uncontaminated by man. Now it was necessary to lock the cabin door. Formerly theft was unknown. A stranger would come, pass the night, cook his supper from the stores, and depart leaving all else untouched. Another railroad, the Chicago, Burlington & Quincy, was being completed into Guernsey. The gangs were working on its embankments and the great piles of posts were there in readiness to fence off its track. The hills on every side were scarred with the trenches and shafts of the prospectors for the iron ore that had led a competing railroad to race to the incipient town. The two partners had sold their claims and intended to remove to the wilderness, where they hoped to live undisturbed by railroads until their days were ended. Before supper, the twilight lasting long into the night, we walked together to a cave in the hills where human bones had been found. On the way we passed many circles of tipi-stones where Indians had camped, and the ground was covered with jasper chips, the refuse of long-vanished artisans. Stein related many anecdotes of the earlier days. He said he had been north to the British line and south to New Mexico, and

had lived among the Sioux until he had acquired their language, which he still remembered. The Indians had never molested him in the cañon.

The opening of the cave was in a branch cañon, just below the summit of the rocky wall. Two great stones were once poised above it, as if for purposes of defence, and one of the mouths was originally barricaded with logs, of which several still remained in place. The principal passage extended back some thirty feet. Its floor was earth filled with bear and other animal bones mingled with charcoal, and all the walls were stained with smoke. Across the shoulder of the hill was an exposure of native carbonate of copper, which Stein declared had been mined by the Indians. In support of this theory he showed us a broad and seemingly artificial road that led up to the workings.

We returned through the cañon in the moonlight. At intervals one could hear the mournful cry of the heron and the faint wail of the coyote among the hills. Along one side of our path lay a long-deserted Indian trail.

Stein's cabin was by no means uncomfortable, with three rooms, well fitted with all the picturesque accessories of life on the frontier. A pair of antlers hung over a generous fireplace, and colored posters, advertisements of powder makers and traveling theatrical companies, decorated the walls. We arose at dawn and started on our drive of twenty-five miles to the quarry.

The site had been explored some years since by the partners, under the impression that it was an abandoned mine. Like many similar aboriginal quarries in other parts of the country, it is known as the Mexican or Spanish mine. The workings were first reported, according to Stein, by a cowboy in 1882. Our friends had excavated one of the pits, and later had contributed, with six others, to a fund with which a man was employed to prospect among the refuse. The place had been visited by the scientific leaders of one of the recent fossil-hunting expeditions, but its character had not been definitely settled, and Stein, in common with other prospectors, still regarded it as pertaining to some ancient people, far older than the existing race of Indians. Our journey northward was enlivened by many novel incidents. Now we would pass through a village

of prairie dogs, and once we descried five antelope bounding one after another across a distant hillside. It was the season of the spring round-up and, for a time, two cow-punchers in broad sombreros, with lariat at saddle-bow, preceded us on our way. They finally turned into one of the tributary cañons where the round-up was then in progress. We passed from time to time the places where the round-up had camped, the freshly-branded calves straying with their mothers. The ride in time became monotonous. Hill succeeded hill with dry gulches between, the valley occasionally spreading into beautiful parks, ideal sites for future settlers. There was but a single house, however, in all the long journey. After camping for dinner we passed Sheep Mountain, a cretaceous hill, whose flat top marked the original level of the cañon. From almost every point Laramie Peak, some thirty-five miles to the west, its top covered with snow, was in view.

We reached the quarry at about sunset. There was still time in the long twilight to make an examination of the workings. They proved, as Dorsey had anticipated, to be simply the familiar quarry where the Indians had once mined their blade material. The stone they sought was jasper of great beauty, contained in a matrix of friable quartzite. The first working visited was on the side of a ravine covered with debris, fragments of worthless stone that had been removed and thrown aside to get at the jasper. One could see where they had pried off the quartzite, block by block, until they reached the desired deposit. Only rubbish had been left, with a few exposures of the blade material which had failed to yield to the efforts of the quarrymen. The place seemed unchanged since the last Indian had visited it. One could seat oneself on a large flat stone amid a pile of chips, pick up an abandoned hammer, and resume the work at the very point where it had been relinquished. As usual there had been a preliminary trimming of the jasper at the quarry, a rude shaping into convenient form, shown by large turtle-backs, rejected as unsuitable for blade-making. The hammer-stones were either masses of the jasper itself or nodules of refractory quartz. No secondary chipping had been done at the quarry. The extent of the workings was remarkable. Thousands of tons of refuse were in sight, yet this was but one of several quarries in the



PLATE 1. View in the Jasper Quarry, Converse County, Wyoming

immediate neighborhood, and we were informed that the works extended northward along the hilltops for a distance of fourteen miles. We camped in the ravine and slept on the ground in the starlight. The next morning we visited the adjacent hills. Pits had been dug to a great depth, one of which had been cleaned out to the bedrock by our host and guide in his fruitless search for ore. Everywhere the ground was covered with flakes and nodules. This refuse extended for miles through the country, and the road, which ran beside an old trail, was lined with fragments. Returning we stopped at a camp-site near a spring to hunt for specimens. The ground was filled with flakes and minute chips to a considerable depth. Among these were many perfect scrapers, the only perfected implements of the quarry material that were to be found in all the country.* It was long past nightfall when we reached the cabin on our return. After supper we naturally discussed the day's adventures. Our host was far from convinced by Dorsey's explanation of the mine. He was a man of romantic temperament, inclined to mysticism, and his natural disposition had been confirmed and developed by a life of comparative isolation. He told us for years he had been in the habit of holding daily communion with the spirit world, employing for the purpose a small table, which, animated by the spirits, enabled him to converse with the unseen powers. We suggested that he should call up, if possible, the ghost of one of the ancient quarrymen and thus settle, by direct testimony, the question that disturbed him. The table was thereupon produced. It was a flimsy structure with four legs, constructed of pieces of packing boxes, one bearing the suggestive label "explosive." The two men seated themselves, placed their extended palms lightly upon the table top and waited patiently for the spirits to manifest themselves. I cannot dwell here upon what followed. We did converse with what Stein declared was the ghost of one of the old miners, and later, at my suggestion, we called up the builder of the great Pyramid and many other worthies. The impression of that night is one that will remain ever vivid in my memory.

* See "An Aboriginal Quartzite in Eastern Wyoming." By George A. Dorsey, Field Columbian Museum. Publication 51, Chicago, 1900.

The next morning we left our hospitable hosts and were driven back to Guernsey. The town, I should say city, seemed to have grown perceptibly since our arrival. I visited the newspaper office and purchased copies of the twenty-sixth number of *The Guernsey Iron Gazette*. This journal gives an interesting picture of life in the three months' old boom town, a town which its promoter has christened the Birmingham of the West.

Leaving Guernsey, we returned to Hartville Junction, where we took a train passing through the marvelous cañon of the North Platte, and proceeded to Casper, where we were to take a stage for Lander, Fort Washakie and the Wind River reservation.

Disappointed in Cheyenne, Casper more nearly satisfied my expectations of town life on the frontier. It was nine o'clock in the evening and the streets were thronged with people. The whirring of the roulette mingled with sounds of instrumental music and singing in the numerous saloons. At the stage office we were informed that all the places for the night were engaged. Unwilling to lose a day we succeeded in securing a buckboard as an adjunct to the regular stage and started off shortly before midnight on our ride of 160 miles to the Wind River. The night was glorious, the stars brilliant and the moon full of splendor. The regular stage preceded us, going ahead with four horses at a sharp gallop. As we drove across the sage-covered prairie the moon went down and the air became piercing cold. At intervals we stopped to change horses, and at four we halted at a wretched cabin where we breakfasted. From time to time we passed long wagon trains, composed of three wagons fastened together and drawn by mules, carrying freight to the fort or wool to the railroad. Great bales of newly-shorn wool lay in piles by the wayside, and now and again we would hear the tinkle of sheep-bells and pass through large flocks of sheep, the young lambs running by the side of the ewes, while the herder with his dogs kept watch on the outskirts of the flock.

The long twilight seemed to be almost directly followed by an intimation of the dawn, and we welcomed the sunrise which brought relief from the intense cold. The country became more and more diversified. Ascending a hill just at daybreak



PLATE 2. Changing Stages on the Way to Washakie, Wyoming.

we came upon one of the great natural wonders of the region, a vast ravine filled with fantastically carved pinnacles of many-colored clay. This phenomenon is locally known as the "Devil's Half Acre."

As the day advanced the sun's heat became intense, and the impalpable dust from the alkali plain most oppressive. Before noon we met a large coach coming from Lander. Horses were changed, we joined the occupants of the first coach, the entire company proceeding together. The place-names in this region are most suggestive. I could not fail to be interested in my fellow passengers who were bound for Lost Cabin. The drivers, too, were interesting, bright, alert, young fellows, all wearing six-shooters strapped in a belt filled with cartridges. These weapons, one is told, are more for ornament than practical purposes. The stages were utterly dilapidated and creaked and groaned unceasingly as they rattled over the stones and deep ruts in the road. We passed the half-way point oppressed with the heat and utterly worn out with the sleepless night-ride. The road now traversed long ranges of mesa covered with grease-wood and sage-brush. No animal life was visible save little ground birds and an occasional sagehen that ran, frightened, into the low brush. At sunset the cold again became intense and a piercing, icy wind from the distant snow-covered mountains chilled us through and through. We drew the miserable robes about us and tried to keep warm. Utterly worn out with fatigue we would doze off, to be awakened with a start as a jolt of the stage would throw us forward, aching in each joint and muscle. Shortly after midnight we passed the Arapaho sub-agency and at four o'clock in the morning arrived in Lander.

Lander wore the same air as Casper. There were the same proportion of saloons and gambling houses, and the same lack of pretention, both in architecture and manners, that is typical of certain parts of the frontier. We procured a wagon at a livery stable and were not long in covering the fifteen miles that lay between us and Fort Washakie, the site of the government military post and principal Indian agency for the great Wind River reservation. The drive was most inspiring. On one side stretched the distant Rockies, capped with snow in long white ridges above the timber line. We crossed one

divide after another until the schools and fort were visible at last. One more divide and a beautiful lake, its surface covered with wild ducks, lay at our feet. Beyond in a charming vista, with the mountains for a background, one could see the canvas-covered tipis, with smoke curling up from between their blackened lodge poles.

Our first step was to call upon the Indian agent, and then to secure an Indian interpreter. The agent has authority not only over the Indians, but whites as well, and the latter are only allowed upon the reservation by his permission. The interpreter should be a man of good character, and of good repute among his tribe, familiar with old customs and well acquainted with the people.

The Wind River reservation occupies 2,828 square miles, and is the residence of two distinct tribes, one, the Eastern band of Shoshoni, of the great linguistic stock of the same name, numbering about 841, and the other the Northern band of Arapaho, Algonquian, comprising 801 souls. These two tribes speak entirely different languages and are unlike in physical appearance and disposition. They keep apart on the reservation, do not intermarry, and it is said that but for the restraining influence of the troops would quickly resume their old hereditary warfare. While they have many customs in common, and indeed, there is an amazing solidarity in everything but language among the Indians throughout the continent, their arts are dissimilar. With a little practice one can distinguish between the handiwork of the two tribes.

The principal agency of the reservation is near the military post of Fort Washakie, the Arapaho having a sub-agency on the Little Wind River,* some twenty miles distant. There is an Indian trader, Mr. J. K. Moore, with an admirably equipped store located on the military reservation within a short distance of the post, as well as an excellent boarding house, where we found accommodations during our visit. The fort itself, a finely shaded enclosure, with well-kept barracks arranged on three sides of a rectangle traversed by a noisy mountain stream, is a delightful spot. It was occupied by a troop of the First Cavalry, from whose com-

* Ten miles above mouth of Little Wind River, at mouth of Popoagie.



PLATE 3. John St. Clair, Fort Washakie, Wyoming.

mandant, Captain Clough Overton, we received the warmest hospitality. It was ration day and the Indians had assembled from all parts of the Shoshoni reservation to receive their weekly dole. Lines of ponies, equipped with high-peaked saddles, were tied to the hitching bars in front of the trader's store. Their owners, wrapped in gay blankets and wearing the usual sombreros, were seated in groups playing cards on blankets spread on the ground, the stakes, dimes and five cent pieces, before them. From time to time a farm wagon, laden with Indian women and children and drawn by jaded ponies, would rattle past, the occupants taking home their supplies of fresh beef from the agency slaughter house. Some of the women, seated astride a pony, carried their children with them on its back.

We were fortunate in securing the services of an Indian named John St. Clair who agreed, for a reasonable compensation, to supply us with a wagon and a riding pony and to act as our interpreter among the Shoshoni. For the Arapaho, another interpreter was necessary. John St. Clair well deserved the high recommendations that had been bestowed upon him. He was a man of sixty years, deep set, with full sagacious face, and long hair that fell to his shoulders. The years had dealt hard with him. He spoke slowly and deliberately. But he was the very personification of honesty and fidelity.

During the winter the Indian lives in a substantial log cabin, but with the mild weather of the late spring, he erects his canvas tipi where he wills and moves from place to place on the reservation as the demands of his ponies for pasture renders necessary.

The cabins are alike in most particulars. They are all imperfectly ventilated, the glass windows sealed hermetically, and the chinks between the logs filled with clay. They are partly responsible for the high mortality, collecting filth and disease; but a death is a signal for their abandonment, and many such deserted houses may be seen over the prairie.

The fire is built directly on the ground in the centre of the cabin and blankets spread around upon which the inmates sleep and the women sit and work during the day. Small portable objects are kept in painted parfleche cases, which are piled around the walls of the house, or are hung

from the rafters. In the canvas tipis the fire is built in the same way and the blankets placed on the ground around it. The fuel is grease-wood from the prairie. Mongrel dogs abound. The men mostly wear blankets, cotton shirts, trousers and moccasins. Many have a charm of some kind attached to their hat band, and are adorned with a bead necklace with a pendant charm on the breast. The young bucks sport a belt full of pistol cartridges, and one sees rifles and shot-guns in most of the cabins. The use of bows and arrows survives only among young boys as playthings. The women wear calico dresses and high moccasins. They paint their faces red and are generally destitute of physical beauty. Children appear very numerous. They are idolized by their parents and are seldom, if ever, scolded or reprovcd. They run and hide at the sight of a white man, for he is the "bogy man" of the Indian nursery.

The apportionment of the land in severalty is now in progress on the Wind River reservation, but little attempt has yet been made at cultivating the soil, and the Indian lives on the government rations, supplemented with a trifling income derived from renting his land for grazing cattle and sheep. In general, the Shoshoni are miserably poor. The children are all educated at the government schools and the present generation are ignorant of the arts, customs and traditions of their fathers. The mortality at the government schools is very high. Mr. Roberts, an intelligent missionary, who has devoted his life to this tribe, explained to me that the children pine away under the restraints of the school-room. The high mortality would seem to be due to the confinement after a nomadic life in the open air. Apart from the army officers and a few devoted missionaries and teachers, the whites in and near the reservations, and, indeed, throughout the entire western country, "have no use for the Indian," and lose no opportunity to cheat and defraud him. They covet the lands set apart as his home and jealously resent the expenditures made by the government for his support and protection.

With the restrictions upon hunting, buckskin clothing has entirely disappeared. In almost every house we saw dance-bustles, feathers and wands, usually carefully wrapped in calico bags and suspended from the roof. For many things



PLATE 4. Shoshoni Tipi, Fort Washakie, Wyoming.

there appeared to be well-settled prices among the Indians themselves. A constant and considerable trade and interchange goes on with tribes on other reservations. We heard frequently of visiting Bannock, and we saw a number of the woven grass bags made by the Yakima and Nez Percé, as well as the basketry water-bottles of the Utes. We were especially interested in a few survivals from primitive conditions among the household appliances used by the women. The stone mortar and pestle do duty to crush coffee. Hides are scraped with a steel blade set in an elk-horn handle. Without the tipis, however, one could find stones that are still used for the same purpose, flakes, called *teshoa*, from quartzite pebbles, as rude an implement as man ever employed. Stone arrow-heads are prized as charms, the Indians seemingly having forgotten that they were made by their immediate ancestors. The ground around the lodges is strewn with stones used for a variety of purposes, and identical with those we find on long-deserted camp sites.

As our mission became known—and news travels quickly among the Indians—industry was greatly stimulated. The women set to work making dice and shinny-sticks, and some of the old men tried to revive the arts they had known in their youth, and manufactured bows and arrows, fire-sticks and the various implements we expressed a desire to purchase. On returning to the hotel we would find a company of Indians camped before the house. They would advance, one at a time, the others patiently awaiting their turn, and produce, one by one, their little store of trinkets. Each piece had to be bargained for separately, as another was not willingly brought out until the preceding one had been disposed of. Part of the money was usually invested in a substantial meal at the hotel table, which was invariably swept clear of everything on such occasions. Again we would find them crowding into the trader's store, buying lavishly in proportion to their means. They are very fond of canned goods, "air-tights," as they are called in western vernacular, the main reliance of herdsmen and miners and all frontiersmen to supplement the invariable bacon and coffee.

The great festival of the Shoshoni, the Sun-dance, was still a few weeks distant, but other dances were held on Sunday

nights, and one of these, a "Wolf Dance," we were fortunate in seeing.

The Sun-dance takes place on the prairie near the agency. A new pole is erected every year, the Indians leaving the old one untouched, so that the plain is dotted with these poles, each with a bundle of twigs, like a crow's-nest, near the top. The Sun-dance is now given without the torture, originally its principal feature, and the other dances have lost much of their religious and ceremonial significance, and are practiced chiefly as diversions. The dances were being given at a place some three miles from the agency, where we had seen a wind-break of tipi-poles arranged in a large half-circle and covered with blankets, on one of our daily rides. The night was threatening when we started out. I followed the wagon on my pony, and, as the rain began to fall and the darkness became intense, gave him a free rein and let him find the road. In this way we crossed high bridges and waded swollen mountain streams, to arrive at last at the dancing place.

The scene was inexpressibly weird. Some twenty dancers stripped to the waist cloth, their faces and bodies vividly and fantastically painted, were seated in the background of the circle, next the blanket-covered poles. At one side were the drummers with a bass-drum, suspended horizontally above the ground. The circle was completed by a band of seated women, without whom was a fringe of spectators. A kerosene lamp afforded an imperfect light for the spectacle. Suddenly the drummers began, singing at the same time in a minor key. The song was taken up by the women, and then the dancers rose, with a jingling of bells and a peculiar hopping motion, keeping the body rigid above the waist, and moving slowly around the circle. Each carried some weapon or implement: an ax, a flute, a fan, a club. All wore bells and tinkling objects, feathers in their hair, bustles, wristlets, armlets, anklets; the treasures we had seen suspended in the cabins, their use now revealed to us. The dance proceeded faster; axes were flourished, shrill cries resounded. The dance became furious. Suddenly the drummers ceased, the singing stopped, and the dancers returned to their places on the ground. There was something infectious in the music. We could not join the

dance, but we wanted to take a place at the big drum and join in the pounding.

The performance was repeated after a short intermission and was followed by another, and in this way may have continued through the night. But the rain was falling heavily, and we reluctantly turned homeward, to arrive thoroughly drenched, but with undiminished enthusiasm.

Riding across the reservation with Captain Overton, he pointed out some of the remarkable natural features of this interesting country. Just over the line from the military reservation is a hot spring which gushes up at a temperature of 140° to form a small lake. Bath houses have been erected here for the soldiers. The Indians also visit the spring to bathe, and are said to have been long familiar with its valuable properties.* Not far from the hot spring is a petroleum spring, where the crude oil, mixed with water, overflows on the prairie. It bubbles through a deposit of asphalt which covers the ground over a considerable area. This asphalt has been utilized to construct a walk within the enclosure at the post.† Lieutenant

* This spring was discovered by Bonneville, August 29, 1832. Is now a civic reserve.

† The following analyses of the water of the hot spring (*a*), of the oil-water (*b*) and the crude petroleum (*c*) from the petroleum spring, and of the asphalt (*d*) have been kindly furnished me by Professor Edgar F. Smith, Director of the John Harrison Laboratory of Chemistry of the University of Pennsylvania :

a. WATER ANALYSIS.

Parts per million.

Total solids	860
Solids after ignition	585
Total ammonia	1.93
Cl	46
SO ₃	4.8
H ₂ S not determined on account of separation of sulphur.	

ANALYSIS OF SOLIDS.

SiO ₂	29
Al ₂ O ₃	11
CaO	265.6
MgO	63
Alkalies not determined, no more water.	

D. L. Wallace.

Overton related many anecdotes of the late Chief Washakie, who died in February, 1900, and was buried with military honors in the little graveyard. Washakie had always been friendly to the whites, and his death was deeply lamented.

b. OIL-WATER ANALYSIS.

1. Solid matter	966
2. Volatile matter in above, principally organic (solid)	312
3. CaO	109
4. MgO	4
5. SiO ₂	24
6. Fe ₂ O ₃ , Al ₂ O ₃	12
7. Chlorine	66
8. SO ₃	5
9. Nitrates	Trace.
10. Nitrites	None.
11. Free H ₂ S	62
12. Sulphides	5
13. Total ammonia	1.931
14. Oily organic matter (ether extract)	370
All quantities in parts per million.	<i>Futweiler.</i>

c. CRUDE PETROLEUM.

Specific gravity	.978
Moisture	27.4%
Mechanical impurities	.1%
Sulphur	.6%

FRACTIONS.

— 250°	Trace.
250°–300°	8.4%
Heavy oils, 300°–400°	45.0%
Heavy oils, 400° and above	3.0%
Residue	16.0%
	<i>Setsler</i>

d. ASPHALT.

Specific gravity	1.859
Moisture	.45%
Petrolene	21.34%
Turpentine fraction	8.78%
Chloroform fraction	Trace.
Asphaltine	8.78%
Total bituminous matter	30.12%
Organic matter, not bitumen	5.7%
Mineral matter	35.7%
Sulphur	.5%
	<i>Setsler.</i>



PLATE 5. Chief Washakie.

He had kept his people under perfect control. There had been several claimants to his position since his death, but no chief had been appointed.

Our stay was too short to enable us to do much in collecting myths or traditions from the Indians themselves. I found that the Rev. John Roberts, who is in charge of the Episcopal school and mission, had accumulated a vast store of information concerning the Indians during his eighteen years' residence. He related that the Shoshoni believe in a personification, the principle of evil, whom they call Nîn-nim-be, a little old man, very short, who lives up in the mountains. To meet him presages certain death. If a trifling accident happens when a Shoshoni starts on a journey he will turn back, afraid of Nîn-nim-be. They believe that Nîn-nim-be shoots with invisible arrows. If a horse or cow becomes ill they say Nîn-nim-be shot it. In support of their belief they exhibit the old stone darts which they pick up, saying they are the points of Nîn-nim-be's arrows. The tribe is in possession of a sacred stone, which they guard carefully, believing that good and evil can be worked by its means. They say that the world was discovered by a long-billed bird, the Wid-e-ge. Mr. Roberts related that he once interrogated a medicine man as to the way in which he attained his position. The latter replied that he went to the mountains and fasted and prayed, and at the end of some days three animals appeared to him: an eagle, a bear and a badger. The eagle addressed him and, taking off one of his claws, gave it to him and told him that by means of it he could command all the powers of the air. Then the bear addressed him and, taking off one of his claws, gave it to him and told him that by means of it he could command all the powers of the earth. Finally the badger addressed him and, taking off one of his claws, gave it to him and told him by means of it he could command all that was under the earth. In support of his statement the medicine man showed three claws, which he wore on a cord around his neck. Mr. Roberts also told me that at some little distance from the post were pictured rocks which the Indians visited.

During our stay at Washakie, we visited a camp of wandering Cree, who had set up their tipis a few miles from the fort. They were renegades from Riel's band who travel over

the country, supporting themselves by horse-trading, and by collecting and polishing horns, which they sell to the whites as ornaments. They formerly used buffalo horns, but these becoming exhausted, they now polish steer horns in the same way. Their chief, who spoke French, had a pocketful of credentials, which he handed us to read.

These Indians had a good supply of substantial wagons and dressed in citizen's clothes. There was nothing of aboriginal manufacture about their camp, but I found a young man who made me a set of implements used in their native games. These included the sticks for the guessing game, a long double ball used by the women, and an implement for a kind of cup and ball, all of which fitted into the series I had been studying. From experience gained in this transaction, I feel justified in referring to, if not commending, the shrewdness displayed by this ingenious youth.

The latter part of our visit was devoted to the Arapaho.

While there is little intercourse generally between the Shoshoni and Arapaho, the dancers go backward and forward, the Arapaho coming up and dancing with the Shoshoni and the latter going down to the Arapaho dance-lodge, some six miles from the post.

There are two principal bands of Arapaho on the reservation. The upper band, which lives in the vicinity of the above-mentioned dance-house, and the lower band centered at the sub-agency, twenty-five miles east of the fort. The permanent houses, however, are scattered all along the road through the valley on the lands which have been allotted in severalty. We made a three days' trip to the sub-agency, lodging at St. Stephen's mission, where a contract school is conducted by two Jesuit fathers. On the way we visited Tallow, chief of the upper band of Arapaho, who presented us each with a stone pipe as a token of friendship. The Arapaho are taller, more reserved and of more independence of character than their neighbors. We were told at the sub-agency that there was to be a dance at the lower dance-lodge on the day following our arrival. Finding the Arapaho had deserted their houses, and were on their way to the lower dance-lodge, we followed them and arrived just as the women were erecting the tipis.

It was interesting to see the systematic way in which they unloaded the heavy poles from the wagons, drove the tent-pegs and stretched the canvas. As one family succeeded another, the scene became more and more animated. Dogs barked, horses neighed, children played on the grass and the boys carried wood for the fires and water from the spring. The men looked after the ponies or stretched themselves idly on the ground. Soon the smoke began to curl from all the lodges, and everywhere preparations were made for the evening meal. As night came on the scene became fairy-like. The conical white tipis were lighted by the fires within. A low drumming came from the dance-lodge. Later the moon added its charm to the spectacle. Our pleasure was somewhat marred by the loss of our horses, a common incident of life on the plains. At midnight we sought the hospitable shelter of Father Feusi at the convent, and the next day our wagon well laden with specimens, started homeward to Washakie. On the road we stopped for a time at the Arapaho Sun-dance lodge. This remarkable structure, which I infer to be used year after year, consists of a great central pole, surrounded with a circle of sixteen posts, each with a projecting beam to the centre and connecting timbers, like the framework of a huge tent, the enclosure being some fifty feet in diameter. The posts were hung with quantities of children's clothing, beaded moccasins, leggins and calico dresses. On the ground within was a painted buffalo skull, in a kind of shrine made by driving small willow stakes and hoops on either side. The clothes were offerings by parents to secure the health of their children. To enter the circle, after it is abandoned for the year, is thought to bring instant death, and the Indians who rode up while we were examining the structure regarded us with unfriendly eyes.

Again at Washakie, we consigned our boxes to the obliging post-trader, Mr. J. K. Moore, and reluctantly engaged passage on the stage that was to take us to Rawlins, on the Union Pacific, 150 miles distant. John, with a cavalcade of gaily blanketed Indians, followed us down part way as we rode the next morning on the creaking vehicle. We parted from all with regret, but we had food for thought during the many weary miles that lay between us and the railroad and civilization.

NOTES ON THE SHOSHONI AND ARAPAHO.

Mr. Roberts writes to the author:

According to the Shoshoni tradition, it was the *Widj-e-ge* that discovered the world. It is a small bird of the "Tit-mouse" family. The Shoshoni say its tongue is divided into six parts; that it drops one of its tongues every month; that its tongues are renewed every six months, so that by catching the *Widj-e-ge*, one can find which month it is of the summer or of the winter. It is "bad medicine" to kill or catch one. The Flicker, *Anegooagooa*, has also medicine. Its tail feathers, worn as head-gear, ward off sickness, and even bring back the spirit of health to the sick, when manipulated by the medicine men. In fact, all the "birds of the air" are supposed to be more or less "possessed," and after you had given me the clue, I found on inquiry that to the *Hoo-jah*, the sage-hen with yellow around its eyes, that the power of divination is attributed. A certain male bird of that species has the power to impart to Indians that spirit, so that the possessor thus endowed becomes a *bo-o-gant*, a medicine man, gifted with supernatural powers, having the gift of healing, of a seer, of an exorcist, of an all-round "medicine man." This wonderful bird was offended some years ago because a foolish Shoshoni shot at it with arrows. In consequence, the medicine men of the present day have only a small portion of the *bo-o* of the mighty medicine men of the olden time.

Indian superstitions and traditions are numbered by the legion. Until quite recently I have taken very little interest in them. I am beginning to think that perhaps from their superstitions, or perhaps from their traditions, some faint idea of their past history may be gleaned. The average heathen Shoshoni is afraid to utter his own name in case the invisible little demon, the *Nin-nim-be*, should overhear him and take to following him like a Nemesis, and shoot him with his invisible flint-tipped arrows. Every sudden death among the Shoshoni is attributed to an arrow of this evil genius, and family and other misfortunes are also charged to his account. They are so saturated with this superstition and are terrorized so by it that it is difficult to get them to

talk of it. The other day I asked your guide, John St. Clair, and others if they had ever heard of the Rock-fairies. They said that they had heard old stories about them, that their name was Nin-nim-be, "little demons," or Nim-me-rig-ar, "Shoshoni-eaters," and that they were the ancestors of the present Nin-nim-be, but no further information could they give further than that they lived in the mountains, were very small, two or three feet in height, were expert hunters, but often fell a prey to eagles. The present Nin-nim-be is said by them to be two and a half to three feet in height (some say eighteen to twenty-four inches), sturdy in build, armed with quiver and arrows, clad in a mountain sheep skin, able to appear and disappear at will, malicious in the extreme, always on the watch for a Shoshoni. The late Chief Washakie said that the Shoshoni had a tradition that they originally came from the south.

The Arapaho, which are much superior people, have no Nin-nim-be. They have traditions of the Rock-fairies and some amusing stories concerning them are handed down from generation to generation. These stories seem to indicate that the Rock-fairies were as expert in trailing or tracking as the Australian Bushmen, and like them, of a low order of intelligence; that they used the sign language, though imperfectly; that they were cannibals, very strong and hardy. If they took after an Arapaho his chance to escape was but small. They were not only very expert trailers, but were also very nimble and fleet of foot. Severe wounds did not affect them much, "for they left their hearts at home." Having shot an Arapaho one of them would carry his body home to feast on. They cooked their food, and were not numerous. They were afraid of a stuffed buffalo calf which the Arapaho carried with them when camped near the mountains as a protection. The Arapaho exterminated them when "the small children," *Hajase daheanau*, as they call them, had left their strongholds to go on a "man hunt." They seized their strongholds which had been left unguarded. According to Arapaho tradition, the dwarfs were a little under three feet in height, dark-skinned, pot-bellied, powerfully built with large arms and legs. One of the stories referred to is that one bright

moonlight night an Arapaho was chased by a Rock-fairy, but fortunately for him a stream intervened which the Arapaho cleared with a bound, but the dwarf, seeing the moon, stars, and sky reflected in the water, turned back at the bank with the exclamation: "Oh, that creek is too deep !"

The Gros Ventres, a branch of the Arapaho, have a tradition they came originally from the northwest, that on crossing frozen water the ice broke up, many were drowned. That portion of the tribe which had crossed came on down. Those on the other side returned. The Arapaho call the north to windward, the south "down below." While they have no names for buffalo (which they call noisy animal), deer (dark animal), horse (animal like an elk), bear (ugly animal), they have names for elk and dog. They seem to be an extremely different people to the Shoshoni and other Snakes. The latter are perhaps the earliest surviving inhabitants of this continent, and I am afraid that perhaps their sun, too, is setting.

OGALALA GAMES.

BY LOUIS L. MERKER.

The Ogalala* Indians of Pine Ridge Reservation are Teton or Tetonwan. Since they are among those who use "l" where other Sioux use "d" they are sometimes called Lakota.

They visit with the Cheyenne, Arapaho and Crow, with whom they were formerly associated, and, having once lived in Colorado, they are acquainted with tribes now located much farther south, but all their traditions point to a home far north in ancient times.

Eagle's Nest Camp is located about eighteen miles from the line of the Rosebud Agency, not quite so far from White River on the north, and perhaps fifty miles from Nebraska on the south. It is an isolated camp of full blood Indians. Excepting marriage customs and the occasional killing of one of their own cattle without permission, it is an excellent community, considered as Indians recently savages. The name of the chief is Pute or "Lip." He has examined and approved the games sent herewith.

Eagle's Nest Butte, from which the camp is named, is 3,465 feet above sea level, while the surrounding country is 2,700 feet. Radiating for about six miles away toward the river and surrounding creeks are "bad land" cañons as much deeper than the prairie as the Butte is higher. The Butte can be seen for, perhaps, fifty miles. The Golden Eagle nests on the inaccessible brow of Eagle's Nest Rock, of the same height as the Butte, but separate from it.

MEN'S GAMES.

THE GREAT HOOP GAME, *Painyankapi*.

The implements consist of a hoop rather more than two feet in diameter, *cangleska* (Fig. 1), bent into shape and fastened when

* The name Ogalala is from *o* (*ta*) "many" and *gala* "to scatter," the last syllable of which is repeated to form the frequentative. It means "many scattered ones."

green, and two pairs of throwing sticks, *painyankapi* (Fig. 2) about forty inches in length, wrapped with thongs, by which each pair is loosely coupled together, so that in the middle they

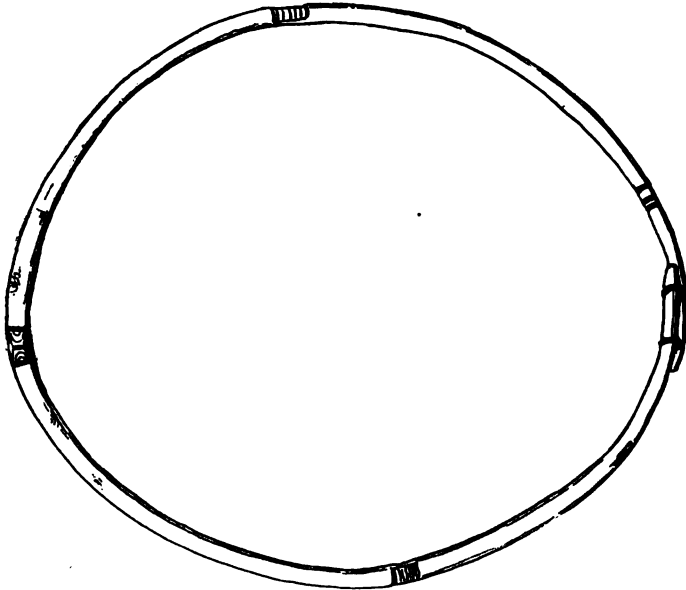


Fig. 1. *Cangleska*, hoop for Great Hoop Game. 21,945. Diameter, 25 inches.

are about a span apart. Each pair bears a small flag, blue or black on one pair, and red or yellow on the other.

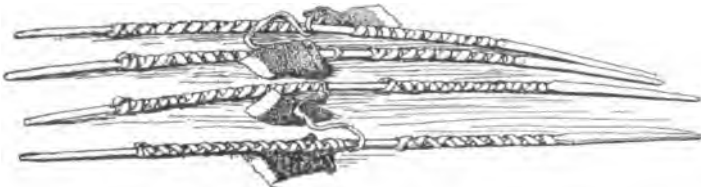


Fig. 2. Throwing sticks, *painyankapi*, for Great Hoop Game. 21,945. Length, 39½ inches.

The hoop is made of a straight ash stick, $1\frac{1}{4}$ inches in diameter at the largest end, and is "as long as the tallest man."

The hoop bears four flattened spaces on each side, at equidistant points. (Fig. 3.) Two players, representing two sides,

throw the two pairs of sticks at the hoop as it rolls past, and the counting is according to the marked or flattened space that lies upon the javelin after the hoop falls. The first mark from the junction *a* is called the "butt" or "stump" (*can huta*), and counts 10; the next, *b*, is "black" (*sapa*), and counts 20; the next, *c*, the "fork" (*okaja*), counts 10, and the next, *d*, called "marks" (*icazopi*), counts 20. When the stick falls across the "butt" and the "fork," it is called "sweepstakes." The game is for 40 points. *Painyankapi* was sometimes called the "buffalo game." It is said to have been played to secure success in the buffalo hunt. The hoop figuratively represents the horns of a buffalo and the bone that supports them.

Playing the game is called "shooting the buffalo." Again the hoop represents an encampment of all the Dakota tribes,

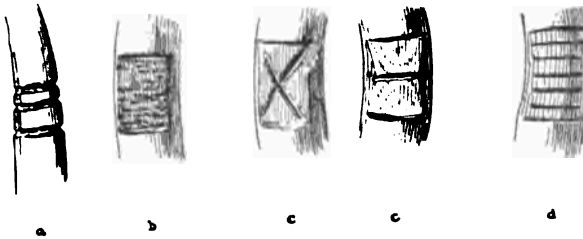


Fig. 3. Marks on hoop for Great Hoop Game.

and the chief's family learn to locate all different tribes upon it. Or it was supposed to represent the rim of the horizon and the four quarters of the earth.

The spaces marked are the openings or passes into the circle of the camp. They also represent the four winds and are invoked as such by the thrower before he throws.

In time of much sickness the camp was ranged in two columns, the hoop painted black on one side and red on the other, the sticks painted, two red and two black, and the hoop rolled between the two ranks four times and then carried away and left in some remote place to bear away the sickness. It was rolled "toward the whites," *i. e.*, south.

The Lakota word for hoop is *cangleska*. It means "spotted wood." No other term for hoop is in use. It follows that the hoop for which all other hoops are named, was spotted. This

applies especially to the conjuror's hoop, colored in yellow,* red, white and blue or black as is convenient, to represent the four quarters of the earth. This hoop is laid upon the ground in the medicine lodge, and after necessary ceremonies, the lights are extinguished, when a noise of eating is heard, and a ring cut from a ripe pumpkin, previously placed within the hoop for the purpose, is supposed to be devoured by the *Wasicun*,† conjured up by the ceremonies.



Fig. 4. Ring for Elk Game. 22,109. Diameter, $3\frac{1}{4}$ inches.

THE ELK GAME, *Kaga woskate*, OR *Haka heciapi*.

A ring of sinew wrapped with a thong, about four inches in diameter (Fig. 4), is tossed in the air and the player tries to catch it upon his stick (Fig. 5). This is about four feet long,

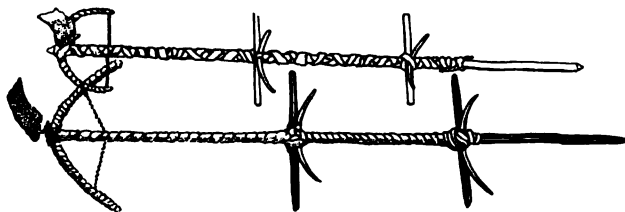


Fig. 5. Sticks for Elk Game. 22,110, 22,110a. Lengths, 36 and $39\frac{1}{2}$ inches.

fitted with semicircles, arcs and cross bars, wrapped with sinew, bark or cloth. It is held in the hand with the forefinger press-

* The yellow is always placed north, but the other colors vary. Note the identity of the words for yellow and north: North is *wasiyala*; yellow is *si*. *Wasiya* is the Spirit of the North, the Storm Spirit, and ruler of all things except the hosts of the deep. The term is frequently given to Santa Claus.

† The term *Wasicun*, now universally given to white men, means a superior and mysterious being.

ing against a small projection that the best made sticks bear near the centre. Caught upon the point, it counts 10; if on the spur nearest the point, 5; on any other point, 1. The game is for any number of points agreed upon by the players. The Elk Game was played to secure success in the elk hunt.

The Lakotas use a special hair ornament as a reward for victory in this game. The Cheyenne award it to the victor in the game next described.

This ornament (Fig. 6) is a miniature gaming hoop or wheel (*tohogmu*), as small as the maker can make it well, with "spokes" like a wheel, ornamented with porcupine quills and tied to a small lock of hair on one side of the crown by a buckskin string fastened to the centre of the ornament.



Fig. 6. Hair ornament, *tohogmu* 21,942.
Diameter, $2\frac{1}{4}$ inches.

THE BUCKSKIN-HOOP, *Tahuka cangleska*.

Played with several small hoops about a foot in diameter, woven with buckskin thongs, with one opening more prominent than the rest, intended to be in the centre, called the "heart." (Fig. 7.) The game is to thrust a small spear (Fig. 8), with a fork at one end to admit the tip of the forefinger, through the "heart," as the hoop is rolled by or flung into the air. When one succeeds, he chases the one who threw the hoop, and endeavors to hit him with it. The one who oftenest pierces the "heart," wins. This is said to be a Cheyenne game, played, like the other hoop games, only at the annual summer gatherings, camp against camp, from morning until a crier calls noon, when the victorious camp is feasted by the losers, and the individual victor adorned with the hair ornament, good for one year.

The writer has not witnessed the game played in this way, a rain preventing when arrangements were made. The following, however, played by large boys and young men, he has seen as many as fifty times: Two forked sticks, about four feet high, to represent men, were set up, thirty or forty paces apart. A prop was placed across, from one foot to the other, both to make them stand erect and make them easier marks.

Properly, the forks should not be more than an inch or so in diameter at the point, and should be split up for a few inches with a cross stick in the splits, so as to make four points come

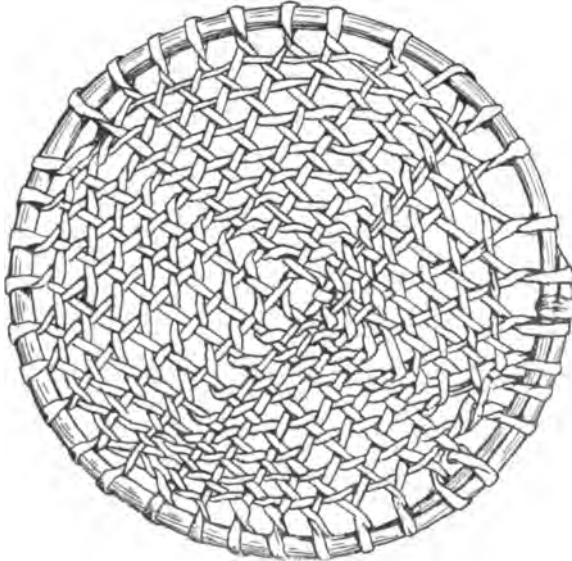


Fig. 7. Hoop for Buckskin-hoop Game, *tahuka cangleska*. 22,112.
Diameter, 11½ inches.

in contact with the ground, and a stick for the hoop to strike, if it rolls under.

Two companies, stationed a very little in front and a little to one side of each "man," take turns rolling the hoops by throwing them against the ground, to make them roll towards the



Fig. 8. Throwing stick for Buckskin-hoop Game. 22,113. Length, 46 inches.

"man" on the opposite side, the players of which defend their "man" by thrusting their spears through the rolling hoops.

The *side* is victorious that oftenest knocks down the "man." The *player* is victorious who oftenest pierces the heart of the hoop, so the victorious player may not be on the victorious

side. My informants do not count this game with their regular hoop games, nor take any pride in the Buckskin-hoop generally. It was contributed by a full blood Lakota, but definite knowledge of the manner of playing cannot be obtained here.

The name *tahuka cangleska* means "neck-hoop" rather than "deerskin-hoop," though it may have the latter meaning, as my informants affirm.

Women say *taoga cangleska* instead of *tahuka cangleska*. This would mean "web hoop" game and make it sacred to Inkтоми (the Spider). Women's speech is somewhat different from men's.

The makers of the hoops for the hoop games are not selected at random. "White-buffalo-cow River," Pte-sa Wakpa, makes hoops for the "Buffalo game." "Red hoop," Cangleska luta, makes the hair ornament hoop.

The hoops sent herewith were made by these men and by "Crazy Horse," Ta-sunk-witko, brother of the desperado Crazy Horse who lost his life while a prisoner some years ago.

THE GUESSING GAME, *Hɛnpɛpecu*, i. e., MOCCASIN GAME.

A small bit of horn (Fig. 9) is concealed in one or the other of one player's hands, and the other player guesses which hand; or, the same object is concealed in one of two, three or four moccasins, and the other player guesses which one contains the horn. Should he have doubts, he can draw the game by guessing which does *not* contain it, and guess on the remaining two for a chance for the next play.



Fig. 9. Horn object concealed in Moccasin Game. 22,114.
Length, 1 7/8 inches.

Two sharpened sticks of cedar, *cuwinyawa*, (Fig. 10), one of the light sapwood, the other of dark heart wood, are held by the guesser, though but one is his. If he uses his own to pull a moccasin toward him, he means that the object concealed is in it. If he uses his partner's stick he pushes the object from him, indicating that the object is not concealed in that moccasin.

The counters are sticks (Fig. 11), sometimes used to play odd or even.

Recently this game became so popular upon the Pine Ridge Agency it was necessary to prohibit it entirely.

The moccasin player observes certain physiognomical signs which he regards as indicating which of the moccasins contains the bit of horn or "bullet." The Ogalala dialect contains a long list of words like our smile, sneer, squint, frown, etc., applied to the twitching of the muscles of the limbs as well as to those of the face. It is said that English will not express



Fig. 10. Cedar sticks used in playing Moccasin Game. 22,115.
Length, 8½ inches.

all or even the greater part of these terms. They seem to have arisen from the necessities of the game.

Men also once played a javelin game, *Hulanacuta*, with a simple straight stick.

I am creditably informed that the Ogalala agreed to abandon their games in a treaty with General Sherman in 1868. This accords with Pte-sa Wakpa's statement that he made the *Painyankapi* thirty years ago. Some say Sherman's treaty stopped the field games.* Others say they were superseded by

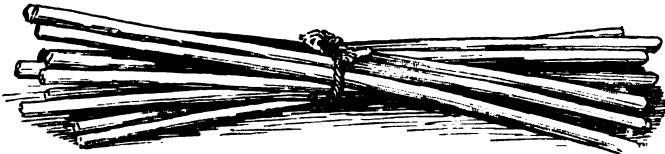


Fig. 11. Counting sticks, *cuwinyawa*, used in Moccasin Game. 22,116.
Length, 15 inches.

the Ghost Dance, and never again used at the great gatherings.†

At present, the hoop games are played only by elderly Indians, at the request of white men. The other games are practiced quite commonly in remote settlements.

* Said at Eagle's Nest Camp.

† Said at Pine Ridge Camp.

WOMEN'S GAMES.

THE GAME OF SHINNY, *Takapsica*.

The implements consist of a bent stick, resembling a walking stick or umbrella handle and a buckskin ball (Fig. 12). Many players form two companies and strive to take the ball with their sticks to two different goals in opposite directions. First play is decided by kicking the ball up into the air. The one who can do so oftenest without letting the ball or the foot

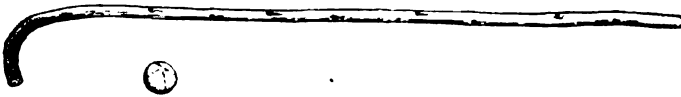


Fig. 12. Ball, 22,118, and stick, 22,117, used in Game of Shinny, *takapsica*. Length of stick, 39 inches. Diameter of ball, 2½ inches.

touch the ground plays first. This is a separate game with the Winnebago.

Shinny is played by women, large girls and school boys. The women of one camp will play against the women of another camp. The boys and girls of one school will play against another school, for, although not quite up to the dignity of men, the game is scarcely limited to women.

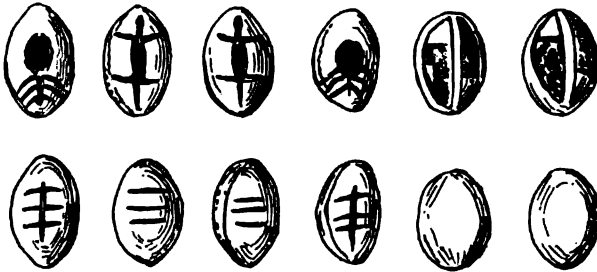


Fig. 13. Set of plumstones for Game of *kansu*. 22,119. Length, ¾ inch.

PLUMSTONE GAME, *Kansu*.

Played like dice. Each spider (Fig. 13) counts 4, each lizard 3, and each turtle 6. There is a connection between the native term for spider (*inktomí*) and the number four (*topa* or *tom*). The turtle presents six visible members when it walks.

An old woman here has plumstones marked with the above signs and also with a *face*, a *thunderhawk* and a *bear track*.

She has three sets of three pairs each. The third set bears a buffalo face on one and marks that represent the pickets of a buffalo-surround on the others. These were used only to secure success in the buffalo hunt. The wagers were sacrifices.

THE DEER-BONE GAME, *Tasiha*.

Four ankle bones of a deer or antelope are strung on a buckskin string with ten loops at one end, and a "thruster" made at present of wire, about four inches long, and pierced at one end, at the other end of the string. (Fig. 14). The bones are sometimes pierced with many small holes. The strand is swung in the air and



Fig. 14. Deer-bone Game, *tasiha*. 22,122.
Length, 19 inches.

the wire is thrust into one of them, counting from one to four in order, or as many as the number of loops passed through. Some number five or six bones on one string.

BOYS' GAMES.

GRIZZLY BEAR GAME, *Mato woskate*.

Two dagger-like sticks (Fig. 15) are held in the hands like two daggers, but represent bear's claws. One or more boys have the claws. The others have "houses" one stick high.



Fig. 15. Implements for Grizzly Bear Game. 22,123. Length, 11¾ inches.

The bear cannot go over a stick, but may go under if he can lift it without using his hands, *i. e.*, with his head. To do this he digs with the wooden claws like a dog, and while he digs the man runs and the bear gives chase. The game is for the bear to touch a man with the claws, when the man touched must take them and be a bear in exchange with the former bear, who becomes a man.

WOOD SHINNY, *Can takapsica*.

A block of wood, cut from a seasoned stick about three inches in diameter, is laid upon the ground. Two players, armed with sticks having a natural enlargement on one end (Fig. 16) each paces off fifty steps in opposite directions, and each marks his opponent's goal. Giving the word to each other, they race back to the block of wood, the one who

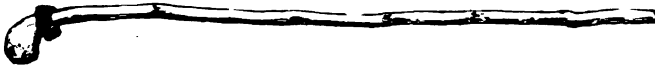


Fig. 16. Stick for Wood Shinny. 22,124. Length, 36 inches.

wins placing his foot upon the block to take possession. He then deliberately aims and strikes the block with all his force toward his goal, and both race after it to take possession with the foot and strike it again as before.

WHIP TOP, *Can wakiyapi*.

Players contend for position in a square marked on the ground, or on ice. The game is to whip the top (Fig. 17) into the square and keep it there. On ice, a square is marked,

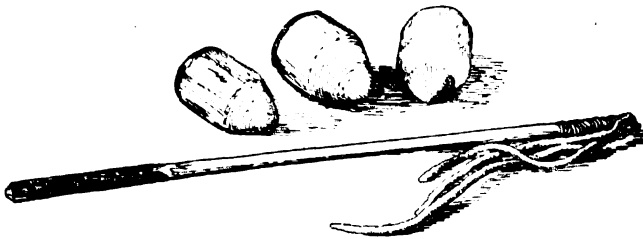


Fig. 17. Whip tops and whip. 22,125, a, b, c, d.
Length tops, 2½ to 3 inches. Length whip (handle), 17 inches.

and each player starts his top outside the square, each trying to whip his top inside. When one succeeds, he holds the square while he keeps his top there and spinning. Should the top fall or run outside the ring, the others press in. The tops are rudely shaped from hard wood sticks, one and a half to two inches in diameter. Some are burned, others are cut into shape. They are painted with concentric bands of red, blue and yellow, if the coloring is obtainable.

A common toy is a bone buzz, *Hohouh yuhmunpi* (Fig. 18). Ogalala boys also play with a whizzer, *tateka yuhmunpi* (Fig. 19), consisting of a slip of thin wood attached by a thong to a stick like a whipstock. It is made to hum when whirled in the air so as to describe a circle.



Fig. 18. Bone Buzz, *hohouh yuhmunpi*. 22,126. Length, 11½ inches.

Boys throw sticks tipped with horn, *Pte heste* (Fig. 20), against the ground underhand to glance forward a great distance. The one whose stick goes farthest takes all the other sticks. They also throw a feathered bone (*Paslo hanpi*) on the ice. This implement (Fig. 21) consists of a piece of beef rib, with two feathers stuck on pegs in one end.

Lakota boys make mud balls and put them on the end of their throwing sticks to fight sham battles.



Fig. 19. Whizzer, *tateka yuhmunpi*. 22,127. Length of handle, 31¼ inches.

A lesser game of battle is played with the heads of a bearded grass or weed (*wica peca*) or "man-sticker grass," made into a ball with a little moistened clay. The stems serve for a handle. They do not always throw and girls sometimes participate. This is varied by spitting rotten wood or dried leaves, chewed fine upon each other.

Boys have toy bows, *Hoksila itazipa* (Fig. 22). They play at duels and the targets for archery are arrows, cactus plants, moccasins, or the dead body of a small animal.

Most Indians have some sort of a sling, and the boys use them to throw stones a great distance, but they seldom throw them at a target.

They also make wooden pop-guns, *Epahoton* (Fig. 23), with which they shoot wads of elm bark.

A snow man is a snow-ball target. A bush with many branches is cut, the ends of the branches cut off, the large end stuck in the ground and the whole hung with old hats, moccasins, cups or other worthless objects, for a target for small stones or clods.



Fig. 20. Boy's throwing arrow, *ple hesle*. 22,128. Length, 29½ inches.

Snow shoes are known, and used in sport by large boys and men. Coasting is enjoyed on a piece of wood or bark like a barrel stave with a rein tied to one end which they hold standing erect with one foot advanced and the rein drawn tight for support.

Foot-racing, rough-and-tumble wrestling, "teetering" astride of a bent bush, bathing, diving, swimming and climbing are known and practiced, but in no regular forms.

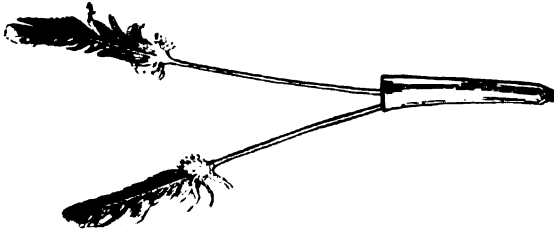


Fig. 21. Feathered bone, *paslo hanpi*. 22,129. Length, 25 inches.

I never heard an Indian boy or girl whistle, except when taught to do so. They talk in company and are still when alone.

They have a practice of stopping the circulation in one hand by grasping it firmly around the wrist with the other hand. Then by moving the fingers and stroking against the body they make it look like the hand of a corpse. Sometimes when sick they do this and predict death or recovery from the time it takes for the hand to assume a natural appearance. These predictions are generally correct. All Indians seem to practice it.

GIRLS' GAMES.

Girls throw long sticks tipped with horn, *Winyanta paslo hanpi*. The sticks (Fig. 24), held by the extreme end with forefinger behind, are cast high in the air. The game is played for small sticks about the size of lead pencils, or larger, the same as are used for counters by men in the Moccasin Game.

The girls make dolls of corn husks, buckskin, and at present, of cloth and beads. Both boys and girls make clay figures of



Fig. 22. Toy bow and arrow, *hoksila-itaxipa*. 22,130. Length of bow, 30 inches.

horses, cattle, dogs, men and other objects.* They also make elaborate toy tents or tipis.

The following account describes the games and sports of the boys and girls of an Ogalala camp in the summer of 1900, played for the writer's benefit:

About four o'clock in the afternoon all the boys and girls assembled at the house or tent nearest the chosen playground. When the last one arrived the game began by "seeing who will get there first," in which all the boys ran while the girls followed more leisurely. The boy who was next to the largest



Fig. 23. Pop-gun, *epahoton*. 22,131. Length, 6¼ inches.

won the race, but there is reason to believe this was prearranged. The largest did not wish to be first.

When the girls arrived, the winner of the race "went to the centre," and the others joined hands in a circle, singing, "*Ho-wi! Ho-wi! Ho-wi!*" Though now consisting of meaningless syllables, the song is, perhaps, an ancient address to

* Men cut images of pipe stone and call them "stone devils." They are used in conjuring the sick and in recovering lost or stolen property. One was consulted here a year ago. The sick person was to recover in four days if the "power" was obtained. On the fourth day she died.

the sun (*Ho* = voice; *wi* = sun, moon or stars). The game which followed is called *Howi woskate*.

Choosing a weak point, where two girls were stationed, the centre boy broke through and ran. The boys gave chase and the girls followed as on-lookers at a respectful distance. As seemed to be expected, the largest boy caught the runner, though not without an exciting chase, whereupon all returned, the boys and girls keeping well apart, to the vicinity where the circle was first formed. When they had in a measure recovered their breath, the others gathered around the larger boy, pointing fingers at him and derisively calling him, "Chief! Chief!" He chased one and then another. When he followed one, another would run after him and try to give him a push from behind, when, by the rules of the game, he must turn and chase the last one who touched him. When the Chief caught one, the one who was caught subsided, and at length all, except

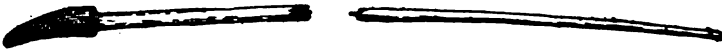


Fig. 24. Girl's throwing stick, *winyanta paslo hanpi*. 22,132. Length, 63 inches.

the girls, were caught. The girls took no part in this play, although they sometimes do so when they are larger than the boys.

The Chief then started on an irregular tour over high objects, jumping down banks and going into difficult places, the other boys after him as in the game of "Follow my Leader." Had any failed to follow, he would have been out of the next game, but when the Chief got back home, all had successfully followed.

The girls in the meantime had made themselves "houses" by marking off squares on the ground by a well or wall, or other object that gave protection on one side. They amused themselves by "going visiting" or exchanging "houses," until the boys returned from the Grizzly Bear Play.*

Then the boys watched their opportunity and a game of "Puss in the Corner" (*Mato kiciyapi*) followed, until all

* The Grizzly Bear Play (*Mato woskate*), is described on page 32, but the game was not played in full.

the girls had lost their "houses," and even then the game continued some time.

Suddenly the Chief cried *Ho-oh ho! Ho!* or some equally sonorous syllables equivalent to the Oyez! of a court crier. The girls had scattered somewhat in anticipation of what was to follow, the game of "Kill the Cow" (*Ptegleska woskate*). The boys all gave attention and called "Kill the Buffalo! Kill the Buffalo! Kill the Buffalo! Kill the Buffalo!" All the girls dropped down upon the ground, and the last to drop would have been the "buffalo," but, in this instance, one girl dropped at the *third* cry, so she was the "buffalo." (Four cries are necessary.) The other girls surrounded her and "Skinned the buffalo," by taking hold of the lower edge of her outer garment with both hands at different points, lifting up and pulling outward until the poor "buffalo" was suspended in the air with her extremities kicking about in a vain search for support, presenting a ludicrous spectacle. They lifted her four times and then deposited her on the ground to all appearances dead. The Chief then divided her up, giving the head to one, one leg to another, and so on until each was provided with a part, and had taken possession of his own. The "buffalo" remained dead as long as she could in the hurly-burly that followed, but at length this scene was over. The girls all hurried to the nearest house and the boys followed more leisurely, as prearranged.

When the boys arrived the girls were all hidden and a game of "Hide and Seek" (*Inahme kiciyapi*) followed, until the girls were all found. The boy who finds a girl claims her as his partner for the evening, but in this instance all the boys found all the girls together, smothered under an old quilt, behind a pile of tents, wagon covers and blankets. The company then separated, all playing "Tag or Last Touch" (*Okicu*) with those who lived at that house and at each house in order in the entire camp.

After supper the Buffalo Girl donned her brother's buckskin clothing, pasted her face with mud made of whitish clay, and went the rounds of the camp, frightening the little children and collecting the crowd of players once more—"Ghost play" (*Wanagi kiciyapi*). At the last house, when all were together, they played "Hand-pinching" (*Hosisipa*), each pinching up a

fold of skin on the back of another's hand with the thumb and forefinger until all hands were connected in a chain that flapped curiously as it was alternately stretched and shortened until at length it broke. If the one who permitted it to break had a forfeit to pay, it did not appear on this occasion.*

The boys then took their leave, but most of them found the girls had taken a glove or handkerchief or other article belonging to them. Each boy guessed who had his property; but if he could not find it, he must call on the girl for it next morning.

The girls went home. The boys lay on the grass till sure all the camp was asleep. Then each crept around every open window or door, or tent, the edge of which could be raised, and "touched" the person of a sleeper. If a girl, she giggled. If it proved to be her parent, he or she did *not* giggle. The boys compared notes and went to bed.

CATALOGUE.

The following implements for the games described have been presented to the Museum of Science and Art by Mr. Meeker. The numbers refer to the museum catalogue.

IMPLEMENTS FOR THE GREAT HOOP GAME, *Painyankapi*.

21,945. Hoop of sapling (*cangleska*), 25 inches in diameter, (Fig. 1), marked with incised marks on both sides as shown in Fig. 3. The first, *a*, nearest the junction consists of three incised rings, painted red; the next, *b*, is cut on both sides for about $1\frac{1}{4}$ inches and marked with black burned scratches;

* The game of "Trampling the Beaver" (*Capa woskate*) should have been played immediately after the "Hand-pinching," but it was growing so late that it was omitted at this time.

A boy lies down and is covered with a blanket that extends beyond his person, and the other boys stand on the edge around him. His head is covered, but his hands are out, and he holds his thumb close to the forefinger on each hand, so as to resemble a beaver's foot. The boys sing and step, sometimes with one foot on the beaver, who tries to touch and name correctly the boy who tramples upon him. When this is done the boy touched and named becomes the beaver in turn. Old beaver dams are still visible. A few beavers are yet to be found. The killing of beaver was, to a great extent, the work of old men and boys, and "trampling on the beaver" was played after feasting on beaver's tail.

the third, *c*, has a cut on both sides marked on one with a cross and on the other with a single notch in the middle, the faces being painted red; the fourth, *d*, is cut with a similar flat face on both sides, $1\frac{1}{4}$ inches in length, with five transverse equidistant notches, all painted red.

21,945. Four rounded sticks (*painyankapi*), $39\frac{1}{2}$ inches in length, slightly larger at the butt, wrapped with thongs, as shown in Fig. 2, and held in pairs with thongs, 11 inches in length. One pair has the butts painted red and a small strip of red flannel tied to the connecting thong, and the other has black butts, with a blue flag. Made by Pte-sa Wakpa, "White-cow River."

IMPLEMENTS FOR THE ELK GAME, *Kaga woskate*.

22,109. Ring of sinew wrapped with a thong, $3\frac{1}{2}$ inches in diameter, painted red (Fig. 4).

22,110. A stick, $39\frac{1}{2}$ inches in length, the end lashed with a curved piece of sapling with the points turning toward the handle (Fig. 5). Two bars of wood, $11\frac{1}{2}$ inches in length, are lashed across the stick, each with a smaller piece of curved wood with points turning toward the handle, as shown in the figure. The curved piece at the end and the body of the stick are wrapped with a thong and the bars, arcs and exposed end of the stick are painted black. There is a projection above the cross-bar, nearest the end to which the curved piece is affixed, against which the forefinger is pressed. A small square of black cloth is tied to the curved end of the stick.

22,110a. A stick similar to the preceding, 36 inches in length, but painted red instead of black, and with a red instead of black flag (Fig. 5). The ends of the arc at the tip are united to the body of the stick by a cord of sinew. The cross-bars are $6\frac{1}{4}$ inches in length. Made by Ta-sunk Witko, "Crazy Horse."

21,942. Hair ornament (*tahogmu*), consisting of a ring of bent twig, wrapped with colored porcupine quills, $2\frac{1}{4}$ inches in diameter, with internal cross and thongs for fastening (Fig. 6). Worn as a token of prowess in the Elk Game. Made by Cangleska Luta, "Red Hoop."

IMPLEMENTS FOR THE BUCKSKIN HOOP GAME,
Tahuka cangleska.

22,111. Hoop of sapling, $11\frac{1}{2}$ inches in diameter, lashed with a network of rawhide thong which is passed around the hoop twenty-four times.

22,112. Another $11\frac{1}{2}$ inches in diameter, the thong passing around the edge thirty-five times (Fig. 7). Both hoops have edge and thong net smeared with red paint.

22,113. A forked stick, consisting of a peeled sapling, 46 inches in length, painted red, with a feather tied at the ends of the forks (Fig. 8). Made by Pte-sa Wakpa, "White-cow River."

IMPLEMENTS USED IN GUESSING GAME, *Hanpapecu*,
or "Moccasin Game."

22,114. A piece of shaved horn, nearly round, $\frac{3}{8}$ inch in diameter and $1\frac{7}{8}$ inches in length (Fig. 9).

22,115. Two sharpened sticks of cedar, $8\frac{1}{2}$ inches in length, one light and the other dark (Fig. 10). Made by Pte-sa Wakpa, "White-cow River."

22,116. Bundle of twelve sticks (*cuwinyawa*), peeled saplings, painted red, 15 inches in length (Fig. 11), used as counters in Moccasin Game and in playing "Odd and Even." Made by Pte-sa Wakpa, "White-cow River."

IMPLEMENTS FOR THE GAME OF SHINNY, *Takapsica*.

22,117. Stick made of sapling, 39 inches in length, bent at the end by fire (Fig. 12).

22,118. Buckskin covered ball, $2\frac{1}{2}$ inches in diameter, the cover made of a single piece and sewed with sinew (Fig. 12). Made by Cee Wanju, "Quiver."

IMPLEMENTS FOR PLUMSTONE GAME, *Kansu*.

22,119. Set of six dice made of plum stones, polished, with incised and burned marks (Fig. 13). Two are marked on one face with a spider and on the reverse with a longitudinal line with three cross marks; two with a lizard, with three transverse marks on the reverse, and two with undetermined marks, as shown in Fig. 13, the reverses being plain. Made by Winyanhopa, "Elegant woman."

22,120. Basket (*tampa*), $8\frac{1}{2}$ inches in diameter, having the bottom covered with a disc of hide (Fig. 25).

22,121. Wooden cup (*tampa*), $3\frac{5}{8}$ inches in diameter and 2 inches deep. Model such as would be used by a child (Fig.

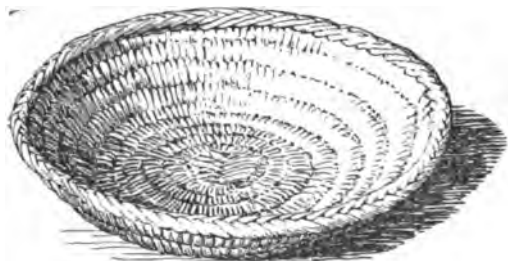


Fig. 25. Basket for Plumstone Game, *tampa*. 22,120.
Diameter, $8\frac{1}{2}$ inches.

26). Made by Matoyaslowin, "Whistle Bear Woman." The game is now played principally with tin cups and pans.

IMPLEMENT FOR DEER-BONE GAME, *Tasiha*.

22,122. Six phalangeal bones of deer, strung on a thong, 11 inches in length, with a brass needle, 5 inches in length, attached to one end, and seven loops of glass beads at the other (Fig. 14). Total length, 19 inches. Made by Winyanhopa, "Elegant woman."

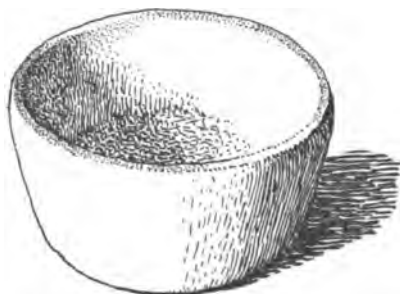


Fig. 26. Wooden cup, *tampa*, for Plumstone Game. 22,121.
Diameter, $3\frac{5}{8}$ inches.

IMPLEMENT FOR GRIZZLY BEAR GAME.

22,123. Two dagger-like sticks, $11\frac{1}{4}$ inches in length (Fig. 15). Made by Si Hoksila, "Benny Brown."

IMPLEMENT FOR WOOD SHINNY, *Can takapsica*.

22,124. Knobbed stick, made of a sapling, 36 inches in length (Fig. 16). Made by Si Hoksila, "Benny Brown."

WHIP TOPS, *Can wakiyapi*.

22,125 a and b. Wooden tops (2), rudely cut from a sapling, $1\frac{3}{4}$ inches in diameter at top and $2\frac{5}{8}$ and 3 inches in length. One painted yellow with red centre on top and beveled edge at top blue. The lower pointed end is painted red and yellow. The other is painted blue on top, with beveled edge red and pointed end yellow and red (Fig. 17).

22,125 c. Wooden top, similar to preceding, but unpainted, $1\frac{1}{2}$ inches in diameter and 3 inches in length (Fig. 17).

22,125 d. Whip, consisting of a stick, 17 inches in length, with a lash made of hide, cut in three thongs, attached with sinew (Fig. 17). Made by Si Hoksila, "Benny Brown."

22,126. Bone Buzz (*hohouh yuhmunpi*), consisting of a toe bone of an ox, tied with sinew, with two small sticks inserted at the ends of the cord (Fig. 18). Made by Pte-sa Wakpa, "White-cow River."

22,127. Whizzer (*tateka yuhmunpi*), a thin, flat, rectangular piece of wood, $1\frac{1}{4}$ by $5\frac{3}{4}$ inches, attached by a thong, 36 inches in length, to the end of a stick $31\frac{1}{4}$ inches long (Fig. 19). Made by Sunka Tanka, "Peter Crier."

22,128. Boys throwing arrow (*pte heste*), a thin, straight dart $29\frac{3}{4}$ inches in length, tipped with a cone of horn and having a bunch of feathers secured with sinew at the shaftment (Fig. 20). Made by Pte-sa Wakpa, "White-cow River."

22,129. Feathered bone (*paslo hanpi*), fragment of beef rib, 8 inches in length, with feathers stuck on two wooden pegs inserted in one end of the bone (Fig. 21). Total length 25 inches. Made by Cee Wanju, "Quiver."

22,130. Toy bow and arrow (*hoksila-ilazipa*). The bow rudely cut from hard wood, with a single curve and a sinew string, 30 inches in length, and the arrow, made of a sapling, with a blunt head 18 inches in length (Fig. 22). Made for sale.

22,131. Pop-gun (*epahoton*). A piece of sapling $\frac{3}{4}$ inch in diameter and $6\frac{1}{2}$ inches in length, with a hole burned through

the centre, the outside being ornamented with burned lines as shown in Fig. 23.

22,132. Girls' throwing stick (*winyanta paslo hanpi*), slender sapling, tipped with a horn point. Total length 63 inches (Fig. 24). Made by Pte sá Wakpa, "White-cow River."

VOCABULARY.

The Lakota names are followed by the Dakota equivalent and definition from Riggs' Dakota Dictionary.* In the latter the aspirate c, s and z, and the nasal n at the end of a syllable, are printed in italics.

Cangleska = *can*-hde'-ska; *can* = wood; hde-ska', "spotted."

Cangleska luta = *can*-hde'-ska du'-ta, "Red Hoop."

Can huta = *can*-hu'-ta, "a stump."

Can takapsica = *can* ta-ka'-psi-ca; *can* = "wood;" ta-ka'-psi-ca = "to play ball by taking up the ball in the club and throwing it."

Can wakiyapi = *can* wa'-ki-ya'-pi; *can* = "wood;" wa'-ki-ya-pi = "trial;" a top is *can'*-ka-wa-ci-pi.

Capa woskate = *ca'*-pa wi-co'-ska-te; *ca'*-pa, "beaver."

Cee wanju = ce wan'-zu.

Ėpahoton = i-pa'-po-pe, "a pop-gun; the elder from which pop-guns are made."

Cuwinyawa = *can* i-ya'-wa.

Gala = ka-da', "to scatter."

Haka heciapi = ha-ka' ki-ci-ya-pi.†

Hanpapecu = han'-pa-a-pe, or han'-pa-a-pe-e-con-pi.

Hohouh yuhmunpi = ho-hu' yu-mni'-pe, "bone whistles."

Hoksila itazipa = ho-ksi'-la i-ta'-zi-pa, "boy's bow."

Hosisipa.

Howi woskate = ho-wi wi-co'-ska-te.

Hutanacuta = hu-ta'-na-ku-te, "to play with the hutinacuta; to throw a stick so as to make it slide along the snow."

Icazopi = i-ca'-zo-pi, "marks."

Inahme kiciyapi = i-na-hma ki-ci-ya-pi.

Inktomi = un-kto'-mi, "spider; also a fabulous creature."

*A Dakota-English Dictionary. By Stephen Robinson Riggs, Washington, 1890.

† Heciapi is properly a woman's word = kiciapi. Kiciapi is from ki'-ci, "one another," and ya-pi', "they go."

Kaga woskate = ha-ka' wi-co'-ska-te, "haka play." Ha-ka' means "branching, having many prongs. Elk is he-ha'-ka.

Kansu = kan-su', "plum stones."

Mato kiciyapi = ma-to' ki-ci-ya-pi.

Mato woskate = ma-to' wi-co'-ska-te; ma-to', "bear."

Matoyaslowin = ma-to' ya-zo-win.

Okaja = o-ki'-zan, "forked."

Okicu.

Ota = o'-ta, "many,"

Painyankapi = pa-in'-yan-ka ki-cun-pi, "the game of shooting through a hoop."

Paslo hanpi = pa-slo'-han-pi, "hutinacut."

Ptegleska woskate = pte'-gle-ska wi-co'-ska-te, "cattle play."

Pte heste.

Pte sa Wakpa = Pte ska wa-kpa', "White-buffalo-cow River."

Pute = pu-te', "the upper lip."

Sapa = sa'-pa, "black."

Si Hoksila = Si ho-ksi'-la.

Sunka Tanka = sun'-ka tan'-ka, "Big Dog," or "Buffalo."

Takapsica = ta-ka'-psi-ca, "to play ball by taking up the ball in the club and throwing it."

Tahuha cangleska = ta-hu'-ka can-hde'-ska. Ta-hu'-ka, "hide of a buffalo, green hide."

Tampa = tan-pa', "white birch." Tan-pa' wa-ksi-ca, "dishes made out of the tanpa."

Taoga cangleska = ta-ho'-ka can-hde'-ska. Ta-ho'-ka-ta, "a spider's web."

Tasiha = ta-sa'-ka, "the hoofs or nails of deer."

Ta-sunk witko = Ta-sun'-ka wi-tko' = "Crazy Horse."

Tateka yuhmunpi = ta-te'-ka yu-mni'-pe, "wind whistler."

Tohogmu.*

Tom = tom, "cont. of topa, four."

Topa = to'-pa, "four."

Wanagi kiciyapi = wa-na'-gi ki-ci-ya-pi.

Wasicun = wa-si'-cun. "Frenchmen, in particular, all white men. Teton, a familiar spirit, some mysterious forces or beings, which are supposed to communicate with men."

Waziya = wa-zi'-ya, "the god of the north."

* Explained by Mr. Meeker as from tahuka and gmi gma, "round."

Waziyata = wa-zi'-ya-ta, "at the pines, the north."

Wica peca = wi'-ca-pe'-ca, "a kind of grass armed with a long, sharp beard."

Winyan-hopa = win'-yan lis'-pa, "beautiful woman."

Winyanta paslo hanpi = win'-yan-ta pa-slo'-han-pi, "girl's hutinacut."

Zi = zi, "yellow."

COLLECTIONS AND PUBLICATIONS.

AMERICA.

GREENLAND.

A miniature snow knife (21,927), from Whale Sound, North Greenland, collected by the Peary Arctic Expedition, has been presented by Mrs. Daniel G. Brinton.

CANADA.

Twenty-four fragments of pottery (21,930), two fragments of clay tobacco pipes, and three bone tools, from ten miles north of Prescott, have been presented by Mrs. Daniel G. Brinton.

Two splint fans (21,890), made by the Micmac Indians on the Bear River Reservation, Annapolis County, Nova Scotia, have been presented by the collector, Mr. Edward Carey Gardiner.

UNITED STATES.

Arizona.—A terra cotta head (21,935) of the Mexican (Teotihuacan) type, said to have been found in Northern Arizona, has been presented by Mrs. Daniel G. Brinton.

Arkansas.—A chipped blade (21,929) from Montgomery County, has been presented by Mrs. Daniel G. Brinton.

Georgia.—Two fish traps (21,970-71) have been presented by Dr. Roland Steiner, of Grovetown, Ga. One (21,970), a conical basket made of withes of live oak, 29 inches in diameter at base, and 70 inches in length, and the other (21,971) of the same material, but smaller, 13 inches in diameter at base and 49 inches in length. The second trap is contracted at the end next the mouth for a length of 9½ inches.

These traps are made and used by the negroes at Grovetown. They are known as "Indian fish traps." The negroes who make them have a mixture of Indian blood. The two traps presented were made by an old negro fisherman named Israel Porter, living on Dr. Steiner's place at Grovetown.

Dr. Steiner states that the material of these traps is always

live oak. Three different types are used. The smallest are from four to six feet in length, and from two to three feet in diameter, with a single compartment. The trap proper is ovoid in shape, the entrance being formed by the withes of the body of the trap extending out from a neck and then turning in, the loose edges meeting in the body of the trap, allowing the fish to go in. The sharp ends meeting at a point prevent their escape.

The second size differs from the above in being larger and in having two compartments, so that the fish can pass from one to the other in trying to escape. The traps are weighted with stones and anchored in streams, and are baited with corn bread, and frequently old pieces of meat. Some have little doors at the top to take out the fish, while in others they are taken out through the mouth by reaching in with the hand.

Illinois.—Two fragments of fossilized human bones (21,933) from Granville, and three fragments of aboriginal salt-vessel pottery (21,936), from Shawneetown, have been presented by Mrs. Daniel G. Brinton.

Massachusetts.—A pecked and polished stone celt (21,972), from Salem, has been presented by Mr. Edward I. H. Howell, M. E.

The implement is six inches in length, and bears the following label:

"This Stone Hatchet was found in Salem, Massachusetts, about the year 1809, on the occasion of the removal of some earth to build a wharf. It had been buried about two feet from the surface and was in the Grave of a human body, no doubt an Indian. This stone was by one shoulder, and the bones of a small animal, probably his dog, by the other shoulder.
ISAIAH HACKER."

New Mexico.—A skull (22,103) and long bones (22,104) from a cliff-house at Puye, fifteen miles from Espanola, New Mexico, have been presented by the collector, Mr. O. B. Phillips.

New York (?).—The following objects, formerly in Dr. Brinton's collection, have been presented by Mrs. Daniel G. Brinton:

21,995–22,000. Nine small silver buckles and other orna-

ments, one a circular boss, three in the form of two interlaced hearts, one octagonal, one round and one square.

22,001. Fragments of wampum belt. Ten rows of shell beads, white and blue, strung on cotton thread, with thongs of buckskin between the rows. Number of beads, 282.

22,002. Seven strings of wampum, blue and white shell beads.

Pennsylvania.—Three white quartz blades (21,937), three jasper blades (21,938) and four argillite blades (21,939), and a fragment of pottery (21,940), from the vicinity of Doylestown, have been presented by Mrs. Daniel G. Brinton.

South Carolina.—Two clay tobacco pipes (21,979-80); one with a human face, and the other black with an animal effigy, from the Catawba Reservation, have been presented by Mr. Verner Nisbet (1901 M.).

Mr. Nisbet states that they were made by an old, full-blooded Catawba Indian woman named Margaret Harris.

MEXICO.

A cast (21,922) of a jade figurine with a Maya inscription, in the collection of Mr. Heber R. Bishop, of New York City, has been presented by Mr. Bishop.

GUATEMALA.

A blow-gun with clay pellets (21,926) of the Kekchi Indians has been presented by Mr. Thomas J. Collins. The gun is 6 feet, 4 $\frac{3}{8}$ inches in length, with a bore 9-16-inch in diameter.

Mr. Collins writes:

The blow-gun is called in Spanish "Serbatana;" in Kekchi, *poop-ché* (shooting stick), as opposed to *poop txitx* (shooting iron), musket or shotgun.

These blow-guns are used for small game and birds and are quite good weapons. I have several times seen them kill birds in trees at good heights, once I calculated with some care to find it a little over sixty feet. The tubes are made of a wood having a little pith in the centre, and are rasped out with pumice sand. The sights are the red seeds of the *tsin-té* tree, fastened on with beeswax, copal, or crude rubber. The latter is the most common, and as it is always sticky they coat it frequently with dust and cobwebs.

NICARAGUA.

Dr. Octavio A. Gamez ('00 M.) and Dr. Ramiro E. Gamez ('02 D.), of Managua, have presented the following specimens of pottery from ancient Indian graves in Rivas, excavated for their father, Dr. J. D. Gamez, in 1899:

- 21,891. Painted bowl.
 - 21,892. Painted bowl.
 - 21,893. Painted bowl.
 - 21,894. Painted bowl.
 - 21,895. Painted bowl.
 - 21,896. Painted bowl.
 - 21,897. Painted bowl.
 - 21,898. Painted cup, with human face in relief.
 - 21,899. Painted bowl, with human face in relief. Height, 8½ inches.
 - 21,900. Painted tripod dish. Feet in form of animal heads. Diameter, 7 inches.
 - 21,901. Painted foot of similar dish.
 - 21,902. Painted jar fragment, human head in relief.
 - 21,903. Seventeen green stone beads, found with preceding.
 - 21,904. Painted jar fragment, human head in relief.
 - 21,905. Jar fragment, animal head.
 - 21,906-7. Jar fragments, animal heads.
 - 21,908-9. Jar fragments, animal heads.
 - 21,910. Terra cotta image. Height, 6 inches.
 - 21,911. Pottery whistle, bird (*paloma*?).
 - 21,912. Terra cotta jar fragment. Inverted and studded with conical projections and surmounted with figure of a highly conventionalized, undetermined animal (lizard?). Height, 7¾ inches.
 - 21,913. Animal vase of polished red pottery, with black line decoration, representing a native animal, the paca (*guardatinaja*). Length, 12¾ inches.
- Also, from Rivas:
- 21,914-15. Two trinket holders, with covers, made of carved nuts called *sacagual*.
 - 21,916. Cup, *jacara*, made of nut of same name, carved by native servant with the arms of Nicaragua and of Chili, a lion, ostrich, eagle and dove, and the name of his mistress.

21,917. Cocoanut box, with lid, carved by a native of Rivas, with views of the country, puma and peacock.

21,918. Cocoanut cup, with stand (*cocoanut jicara*), carved similarly to the above.

COSTA RICA.

The following archæological objects, from Quebrada-Honda, have been presented by Mr. Mauro R. Fernandez (1903 M.):

21,981. Stone dish, with four feet and animal head. Length, 5 inches.

21,982. Stone head, human. Height, $4\frac{3}{8}$ inches.

21,983. Polished stone celt. Length, $6\frac{1}{8}$ inches.

Pottery:

21,984. Tripod bowl. Legs with animal heads and painted designs on sides. Diameter, $3\frac{1}{2}$ inches.

21,985. Tripod bowl (legs missing). Animal effigies on handles. Diameter, 4 inches.

21,986. Tripod bowl. Loop handles; animal heads on opposite sides. Diameter, 4 inches.

21,987. Tripod bowl. Animal heads on opposite sides. Diameter, $4\frac{3}{4}$ inches.

21,988. Tripod bowl. Conventionalized animal. Height, $2\frac{3}{8}$ inches.

21,989. Leg of tripod bowl.

21,990. Small bowl, with loop handles. Diameter, 4 inches.

21,991. Miniature bowl. Height, $1\frac{5}{8}$ inches.

21,992. Saucer. Diameter, $4\frac{1}{4}$ inches.

PERU.

Six fossil cuttle-fish eyes (22,042), purchased by the collector in Arica in 1886, have been presented by Dr. Henry C. Eckstein (1862 M.).

Three fossil cuttle-fish eyes (22,003) have been presented by Mrs. Daniel G. Brinton.

ASIA.

THE FAR EAST.

CHINA.

Two Buddhist rosaries (21,949) of painted beads, one red the other yellow; two divining blocks, *káu púi* (21,951-52) and

a collection of paper clothes, *t chf* (21,953-64), burned at funerals, purchased at Chinese shops in San Francisco, have been presented by the Hon. John Wanamaker.

JAPAN.

A suit of armor (21,978) has been presented by Mrs. Thomas Leaming.

Mrs. William Frishmuth has presented the following sword ornaments:

21,993. Ferrule (*fuchi kashira*).

21,994. Hilt ornament (*menuki*).

INDIA.

The following collection of objects from the Himalayan tribes, collected at Darjeeling by Messrs. Furness, Harrison and Hiller, in 1899, have been presented by the collectors:

22,043. Wooden stamp (*chapra*), for printing a charm; a horse in the centre, 6 by 6 inches. Thibet.

22,044. Wooden stamp for making dough sacrificial effigies. Length, 11½ inches. Nepaul.

22,045. Pair of brass cymbals (*rol-mo*).* Diameter, 11 inches. Thibet.

22,046. Copper flageolet (*rgye-glin*),* hooped with brass rings, set with fragments of turquoise. Length, 19½ inches. Nepaul.

22,047. Long, telescopic copper horn (*rag-dun*),* in three pieces. Length, 68 inches. Nepaul.

22,048. Human thigh bone trumpet (*stag-dun*).* Length, 16 inches. Thibet.

22,049. Small rattle hand drum (*na-ch'un*).* Diameter, 4½ inches. Thibet.

22,050. Large rattle hand drum (*na-ch'un*).* Diameter, 8 inches. With cloth cover. Thibet.

22,051. Yak horn for carrying native spirit (*marva shing*, "spirit horn"). Bound with brass, with leather thong. Length, 21 inches. Thibet.

* Thibetan name. See "The Buddhism of Thibet," by L. Austine Waddell, London, 1895.

22,052. Hand prayer wheel. Embossed copper cylinder, with applied gilded symbolic figures. Thibet.

22,053. Hand prayer wheel. Copper cylinder, old. Thibet.
Both of the above contain paper prayers.

22,054. Lāmaist sceptre or *dorje*. Brass. Length, $4\frac{3}{4}$ inches. Nepaul.

22,055. Thunder bolt dagger (*pur-bu*). Brass. Length, 18 inches. Thibet.

22,056. Rosary formed of disks of human skull (*l'öd-l'en*).* One hundred and eight disks alternating with silver rings strung on blue cotton cord. A pendant of two additional bone beads and two silver rings is attached where the cord is tied. Thibet.

22,057. Bell (*ghanto*). Brass, base silvered, handle surmounted by half *dorje*. Height, $7\frac{1}{8}$ inches. Nepaul.

22,058. Image of Buddha (*Akshobhya*),* one of the five celestial jinas. Brass. Height, $6\frac{1}{2}$ inches. Nepaul.

*22,059. Image of brass, unidentified. Height, 6 inches. Nepaul.

22,060. "Fire devil" (*dhoopni*). A copper vessel with a narrow neck and long inverted tubular mouth. Height, $6\frac{3}{4}$ inches. This is said to be filled with water and placed in the fire, when the steam escapes violently. Nepaul.

22,061. Brass lamp (*sookna*), ewer form. Handle surmounted by five serpents, and lamp proper, by figure of Ganesa. Height, 6 inches. Nepaul.

22,062. Staff used as sun dial by Thibetan lama. Eight sided, each engraved with lines of Thibetan numerals. Length, $45\frac{1}{2}$ inches.

22,063. Volume of Thibetan sacred book. Printed with wood blocks on paper sheets, $5\frac{1}{8}$ by 22 inches. With wooden board covers and wrapped in red cloth.

22,064. Mask of carved wood. Grotesque face, with three eyes, painted blue, with decorations in green, red and yellow. Five carved heads at top. Thibet.

22,065. Mask of carved wood. Grotesque face, with three eyes, painted yellow. Five carved heads at top. Thibet.

* Thibetan name. See "The Buddhism of Thibet," by L. Austine Waddell, London, 1895.

22,066. Charm box. Brass, silvered, oval, hinged in middle. Nepaul.

22,067. Charm box (*kachoori*). Square, with turquoises set in silver filigree. Length, 3 inches. Worn on the breast by women. Nepaul.

22,068. Silver ear-rings, three bosses, set with turquoises. Nepaul.

22,069. Finger ring, silver, set with blue stone. Nepaul.

22,070. Finger ring, silver, with circular boss. Nepaul.

22,071. Finger ring, silver, similar to preceding. Nepaul.

22,072. Finger ring, brass, set with turquoises. Bhotan.

22,073. Conch shell armlet (*sunk choora*), worn on the wrist. Bhotan.

22,074. Conch shell trumpet (*sunk*). Perforated shell, engraved with flower and scroll. Length, $5\frac{1}{2}$ inches. Thibet.

22,075. Silver chatelaine (*chup chup*), with pendent ear spoon, tweezers, etc. Bhotan.

22,076. Head ornament (*pattoo*). Oval collar-shaped hoop, covered on the outside with red cloth, with red and blue beads sewed alternately along outer edge. Greatest diameter, 11 inches. Thibet.

22,077. Bow. Made of section of heavy bamboo, notched near ends for string of twisted cord. Length, 57 inches. Bhotan.

22,078. Arrow. Reed shaft, with two feathers and conical iron point. Length, 29 inches. Darjeeling.

22,079. Whistling arrow. Cane shaft, with three feathers and wooden whistle on point. Length, $28\frac{1}{2}$ inches. Darjeeling.

22,096. Skull of a Thibetan lama.

Messrs. Furness, Harrison and Hiller have presented three fragments of Græco-Buddhist sculpture (22,080-82), obtained at Rawal Pinde, where they had been taken by Afghan traders. Said to have been obtained in Chitral, but probably from the Swat Valley.

A black stone lingam (21,977), purchased in Benares, has been presented by Dr. James V. Ingham.

BURMA.

The following objects have been presented by Messrs. Furness, Harrison and Hiller:



PLATE 6. Greco-Buddhist Reliefs, 22,080-81.



PLATE 7. Græco-Buddhist Relief, 22,062.

22,099. Shan fire syringe of turned horn, 4 inches in length, with small silk bag containing a vegetable fibre used as punk. Purchased in Mandalay.

22,100. Grinding stone, circular, $6\frac{1}{4}$ inches in diameter, carved and turned of fine sandstone, with raised centre and three short feet. Used to grind saffron wood to form a paste which the women smear on their faces at the toilet to whiten them. Water is placed in the gutter surrounding the raised centre on which the wood is grated. With three pieces of saffron wood called *lanake*; when ground on the plate, *song-picen*.

22,101. Colored silk, showing diagonal pattern.

PHILIPPINE ISLANDS.

A native hat (21,973), made of woven palm leaf, of a soldier of Fourth Company of the Battalion "Paliparan," has been presented by Major John Biddle Porter, Twenty-eighth Infantry, U. S. V.

POLYNESIA.

HAWAII.

A large piece of old tappa cloth (22,038) and a wooden mallet (22,039), for beating tappa cloth, the latter said to have been obtained from a native grave in Honolulu, have been presented by Dr. Henry C. Eckstein (1862 M.).

SAMOA.

Dr. Henry C. Eckstein has presented the following objects:

22,004-11. Eight fans (*ili*), woven with wooden handles.

22,012-17. Six splint and carved wood combs, three ornamented with glass beads.

22,018-19. Two baskets made of woven palm leaf.

22,020. Two wild boar tusks, worn as ornaments, suspended from necklace.

22,021-27. Seven pieces of tappa cloth, measuring from about 5 by 8 feet to about $7\frac{1}{2}$ by 11 feet, decorated in different patterns with painted and stamped designs.

22,028. Necklaces (2) of seeds, white and red. White, Job's tears (*coix lacryma*); red (*erythrena*).



Fig. 27. Mandingo divining staff, *Bundu Naña*, "Bush Spirit." 21,944. Length, 42½ inches. Sherbro River, Sierra Leone, Africa.

22,029. Necklace of seeds. White and blue (*coix lacryma*).

22,030. Necklace of seeds, red.

22,031. Necklaces (4) of seeds, red.

22,032. Necklaces (4) of shells, land snail shells (*Helicina pisurn*, Phil).

22,033. Mat of woven grass with colored pattern, 68 by 72 inches.

22,034. Mat of woven grass, plain, with knotted fringe at one end and red worsted borders, 90 by 108 inches.

22,035. Mat of woven palm leaf in colored patterns, 56 by 69 inches.

22,036. Mat of woven palm leaf, perfectly plain, 72 by 96 inches. Purchased in Apia, but made in some other island.

22,037. Mat of woven palm leaf, with black and red border, 80 by 112 inches. Purchased in Apia, but made in some other island.

AFRICA.

A divining rod (21,944), *Bundu Naña*, "Bush Spirit," used in Gri-gri bush ceremonies to discover a culprit from the Mendes, Sherbro River, Sierra Leone, West Africa, has been presented by the Rev. Robert Hope (Fig. 28). Mr. Hope states that the person using it would be masked, wearing a mask like one of the faces on the stick, and clothed with a garment of dark brown fibre. He would not be known to the participants in the ceremony. Mr. Hope has also presented a "Phonetic Chart of the Vei Characters," compiled by Momolu Massaquoi, Prince of Gollinas, concerning which the donor writes as follows:

HUNTINGDON, PA., October 24, 1900.

The Phonetic Chart of the Vei Characters is only interesting as a modern effort of a few West

African negroes to form a system in imitation of the writing which they saw in use among white traders. The characters have no philological value, being merely arbitrary signs invented and still being invented for the Vei people.

Dualu Bukere was personally known to the C. M. S. clergyman, Rev. S. W. Koelle, about the year 1850. Fifteen years or so before that date, Bukere after racking his brains over what he had seen as an errand boy for the traders, had a dream like this,—an old man came to him and with his stick made a mark on the sand *g* and called it “i,” then he made another *j*; and called it “na,” then putting the two together “thou” and “come,” he had the writing for the very common imperative. As Mr. Koelle suggests, this was simply the reflex action of his thoughts by day taking shape by night. Bukere had four brothers or cousins, and they at a place called Bandakolo, now no longer in existence as a town, ground out the mind-killing chart of signs.

These West Coast dialects are continually changing, and in the vocabulary so carefully compiled by Mr. Koelle (to be found in the University Library), we find many words entirely lost; *i. e.*, “*i ton*”—“your name?” is now unrecognizable; in place of this we have “*i twai*.”

Two grass cloth mats (22,040-41) purchased at St. Paul de Loando in 1866, have been presented by the collector, Dr. Henry C. Eckstein.

SPECIAL COLLECTIONS.

Fans.—Mrs. Joseph Drexel has made the following additions to her collection :

21,969. Canada. Indian fan of birch bark, decorated with colored quill work. The body of the fan is circular with red silk border and having a mirror inserted on one side. Length, 13 inches.

21,921. Hawaii. Braided palm leaf fan with border and handle of braided straw worked in black and white pattern. Length, $15\frac{1}{4}$ inches.

21,974. Hawaii. Braided palm leaf fan, leaf shaped with dyed fibre of lace tree inserted. Wooden handle. Length, $26\frac{1}{4}$ inches.

21,975. China. Red lacquer fan (*brisé*), nineteen sticks and two guards, the sticks painted on both sides in colors with characteristic Chinese scenes, the guards decorated with gold lacquer.

21,976. Algiers. Woven straw fan, ax-shaped, embroidered with flower in colored silk, with bamboo handle. Length, $18\frac{1}{4}$ inches.

Fire Making and Lighting.—A Chinese steel and case (21,965), purchased in San Francisco, and three miners' candle-sticks (21,946-48) from the Pacific Coast, similar to the one (21,063) from Riegelsville, Pa., figured in the BULLETIN, Vol. II, p. 55, have been presented by the Hon. John Wanamaker.

A tin lamp stand (21,919), purchased in Lancaster, Pa., has been presented by Mr. Richard H. Day.

Mr. Louis L. Meeker has presented also the following gaming implement, made by the Cheyenne, in Oklahoma.

21,943. Feathered bone for throwing on the ice, called *hé-ko-ne-na-tsis-tam*, or bone game, consisting of a piece of buffalo or beef rib 7 inches in length with two sticks fitted at one end, each bearing a hawk feather dyed red (Fig. 28). Total length 25 inches. Mr. Meeker states that the thumb is placed

on the side of the bone, the forefinger between the sticks, with the end against the end of the bone and the other three fingers opposed to the thumb against the other side of the rib, the converse side of which is down. It is then thrown down and forward against a smooth surface, preferably ice, so it glances forward, as throwing sticks and snow snakes do.

The marks etched on the bone represent a horned toad, a tarantula, the milky way and the moon. The four marks invoke the four winds, while the six legs of the tarantula represent *up* and *down* and the cardinal points.

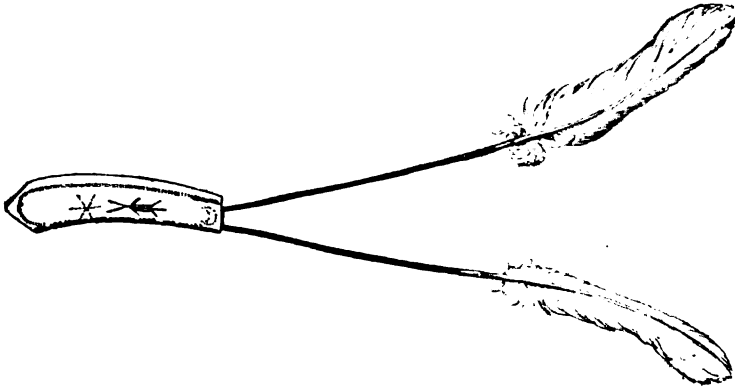


Fig. 28. Bone game, *Ak-ko-ne-na tsis-lam*. 21,943. Length, 25 inches.
Cheyenne Indians, Oklahoma.

Games.—A pair of juggler's cups, obtained from a Hindu juggler in Philadelphia, have been presented by Mrs. William Frishmuth.

A pair of ball sticks (21,967), used by the Chicasaw and Choctaw Indians in Indian Territory; a Japanese ball die (21,966) with numerals from 1 to 18, a copy of a European form, and a Chinese humming top (21,950) have been presented by the Hon. John Wanamaker.

A puzzle (21,920) bottle with tube and shot has been presented by Mr. David Rinker.

Musical Instruments.—A number of important additions have been made to the collection by Mrs. William Frishmuth, the original donor. The instruments are now being labeled, and a complete catalogue being prepared for publication in the BULLETIN.

Numismatics.—Mrs. William H. Miller has presented the following United States, American, Colonial and State coins :
United States regular issues :

- Gold, \$10.00. 1795, 1841, 1842.
 \$5.00. 1795, 1803, 1839, 1844. .
 \$3.00. 1854.
 \$2.50. 1796, 1796, 1805, 1802.
 \$1.00. 1849, 1851, 1852, 1853, 1854, 1854, 1855, 1856,
 1857, 1858, 1859, 1860, 1866, 1870, 1883.
- Silver, \$1.00. 1794, 1797, 1798, 1801, 1803, 1840, 1841, 1842,
 1843, 1851, 1852, 1856, 1857, 1858, 1859, 1860,
 1861, 1863, 1865, 1866, 1869, 1873, 1875, 1876,
 1878, 1878, 1880, 1881, 1882, 1882, 1883, 1883,
 1884, 1885.
- 50 cents. 1794, 1795, 1795, 1801, 1803, 1807, 1807, 1809,
 1814, 1820, 1825, 1834, 1836, 1840, 1852, 1856,
 1860, 1862, 1863, 1864, 1865, 1866, 1869, 1873,
 1875, 1876, 1882, 1884, 1885.
- 25 cents. 1804, 1806, 1822, 1852, 1860, 1862, 1864, 1865,
 1866, 1869, 1870, 1882, 1883, 1884, 1885.
- 20 cents. 1876, 1878.
- 10 cents. 1798, 1801, 1802, 1804, 1805, 1825, 1828, 1834,
 1835, 1837, 1839, 1840, 1843, 1847, 1854, 1856,
 1864, 1865, 1866, 1869, 1880, 1883, 1884.
- 5 cents. 1794, 1797, 1801, 1830, 1832, 1839, 1840, 1841,
 1843, 1847, 1848, 1849.
- 3 cents. 1850, 1851, 1862, 1863, 1864, 1866, 1869, 1870,
 1873.
- Nickel, 5 cents. 1866, 1867, 1868, 1869, 1870, 1872, 1873, 1874,
 1875, 1876, 1878, 1881, 1882, 1883, 1883, 1883,
 1884, 1885.
- 3 cents. 1865, 1866, 1867, 1868, 1869, 1870, 1872, 1873,
 1874, 1875, 1876, 1878, 1880, 1881, 1882, 1883,
 1884, 1885.
- Copper, 2 cents. 1864, 1865, 1866, 1869, 1870, 1873.
- 1 cent. 1793, 1793, 1793, 1793, 1794, 1794, 1795, 1795,
 1796, 1796, 1797, 1797, 1798, 1799, 1800, 1801,
 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809,
 1810, 1811, 1812, 1813, 1814, 1816, 1817, 1818,
 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826,

- 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834,
 1835, 1836, 1837, 1838, 1839, 1839, 1840, 1841,
 1842, 1842, 1843, 1844, 1845, 1846, 1847, 1848,
 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856,
 1857.
- Nickel, 1 cent. 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864.
- Bronze, 1 cent. 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871,
 1872, 1873, 1874, 1875, 1876, 1878, 1879, 1880,
 1881, 1882, 1883, 1884, 1885.
- Copper, $\frac{1}{2}$ cent. 1793, 1794, 1794, 1795, 1795, 1797, 1800,
 1802, 1803, 1804, 1805, 1806, 1807, 1808,
 1809, 1810, 1811, 1825, 1826, 1828, 1829,
 1831, 1832, 1833, 1834, 1835, 1836, 1840,
 1841, 1842, 1843, 1844, 1845, 1849, 1849,
 1850, 1851, 1852, 1853, 1854, 1855, 1856,
 1857.
- United States experiment and patterns:
1792. Large pattern cent.
 1836. Gold dollar.
 1836. Silver gilt dollar.
 1837. 1 cent (Feuchtwanger's composition).
 1838. \$1.00. 50 cents (3), silver.
 1839. 50 cents, silver.
 1850. Ring cent.
 1851. Cent.
 1852. Ring dollar, gold.
 — Blank for ring dollar, gold.
 — Blank for ring half dollar, gold.
 1852. Ring dollar, silver.
 1852. Ring dollar, nickel.
 1853. Cent.
 1854. Cent.
 1855. Cent.
 1856. Cent.
 1858. 50 cents, silver.
 1858. Cent (3).
 1859. 50 cents, silver.
 1869. 50 cents, silver (3).
 1869. 25 cents, silver (3).
 1869. 10 cents, silver (3).

Private Issues.**CALIFORNIA.**

- Gold—1854. \$1.00, octagon.
1869. \$1.00, round.
1852. 50 cents, round.
1853. 50 cents, round.
1856. 50 cents, octagon.
1869. 50 cents, octagon (G.).
1869. 50 cents, round.
1854. 25 cents, round.
1869. 25 cents, round.
1869. 25 cents, octagon.
No date. 25 cents, round (2).

UTAH.

- Gold—1849. \$20.00. Holiness to the Lord.

NORTH CAROLINA.

- Gold—No date. Bechtler dollar (27 G.).
Bechtler dollar (28 G.).

MISCELLANEOUS.

- Copper—Two marked N. C.
Two blank.
1836. First steam coinage.

Colonial Coinage.**MASSACHUSETTS.**

- Silver—n. d. New England Shilling.
1652. Pine Tree Shillings (6).
1652. Oak Tree Shillings (2).

ROSA AMERICANA.

1722. Penny.
1723. Penny.

State Coinage.**MASSACHUSETTS.**

1787. Commonwealth cent (2).
1788. Commonwealth cent.

VERMONT.

1785. Vermonts Res Publica.
1786. Vermontensium Res Publica.
1788. Vermon Auctori (2).

CONNECTICUT.

- 1785. Auctori Connec (2).
- 1787. Auctori Connec (4).
- 1788. Auctori Connec (1).
- n. d. Granby token.

NEW JERSEY.

- 1786. Nova Cæsarea.
- 1787. Nova Cæsarea (3).
- 1788. Nova Cæsarea.

NEW YORK.

- 1787. Excelsior cent (2).
- 1787. Brasher's Doubloon (electro).
- 1787. Cent.

KENTUCKY.

- n. d. Cent.
- 1785. Nova Constellatio.
- 1785. Confederatio—Immunis Columbia.

WASHINGTON PIECES.

- 1783. Washington and Independence—Unity States cent.
- 1783. Washington and Independence.
- 1792. Washington, President.
- 1795. Washington, Liberty and Security.
- n. d. Washington Calendar.
- Washington, North Wales Token.
- Success to the United States.
- An asylum for the oppressed of all nations.

A box thaler (21,923), of Frederick the Great of Prussia, 1759, containing forty engraved prints of his battles, has been presented by Mrs. Randolph Wood.

A bronze medal, souvenir of the Paris Exposition of 1900 has been given by Professor Maxwell Sommerville.

LECTURES.

A course of free public lectures, illustrated by objects in the Museum and by lantern slides, has been delivered in the Widener Lecture Hall of the Museum, on Wednesday afternoons at 4 p. m., as follows:

October 24.—Dr. Marshall H. Saville, Curator of Archæology in the American Museum of Natural History, New York City, "The Ancient City of Mitla, Mexico."

October 31.—Mr. Stewart Culin, "The Wind River Indian Reservation, Wyoming."

November 7.—Dr. A. T. Clay, "The Bible and the Assyrian Monuments."

November 14.—Dr. William H. Furness, 3d, "A Collecting Trip Among the Wild Tribes of the Naga Hills in Assam."

November 21.—Mr. Harlan I. Smith, of the American Museum of Natural History, New York City, "Archæological Discoveries on the North Pacific Coast of America, made by the Jessup North Pacific Expedition."

November 28.—Professor Maxwell Sommerville, "The Buddhist Temple."

December 5.—Mr. Stewart Culin, "The Bannocks, Utes and Piutes of Idaho, Utah and Nevada."

December 12.—Mr. Stewart Culin, "The Origin and Development of the Printed Book."

December 19.—Professor Thomas Wilson, Curator, Department of Prehistoric Anthropology, United States National Museum, Washington, "Prehistoric Art."

LIBRARY.

The following are among the most important acquisitions since the last issue of the BULLETIN :

Il Manoscritto Messicano Vaticano 3738, detto Il Codice Rios. Riprodotto in Fotocromografia a spese di sua eccellenza il duca di Loubat, per cura della Biblioteca Vaticana. Rome, 1900.

Gift of the *Duc de Loubat*.

La Géographie Historique et les Droits Territoriaux de la Republique de Costa-Rica. Par Manuel M. de Peralta.

Gift of the *Author*.

Leçons d'Anthropologie Philosophique. Par Daniel Folkmar. Paris, 1900.

Gift of the *Author*.

Anthropologische Studien. Von Hermann Schaaffhausen. Bonn, 1885.

Gift of *Professor Schaaffhausen's heirs*.

Forma Urbis Romæ. Fasciculi 1 to 7. R. Lanciani. Rome. Various dates.

Gift of *Mr. Clarence H. Clark*.

Histoire des Évantailes chez tous les peuples et à toutes les époques. Par S. Blondel. Paris, 1875.

Gift of *Mrs. Joseph Drexel*.

Mrs. William H. Miller has presented the following works on numismatics :

Descriptive catalogue of rare and unedited Roman coins, from the earliest period of the Roman coinage to the extinction of the empire under Constantinus Paleologos. With numerous plates from the originals. By J. Y. Akerman. 2 vols. London, 1834.

Numismatic Manual, or guide to the study of Greek, Roman and English coins, with plates from the originals. By J. Y. Akerman. London, 1832.

Medaglie inedite, publicate da Francesco Capranesi. Roma, 1840.

Dialogues upon the usefulness of ancient medals, especially in relation to the Latin and Greek poets. n. p. n. d.

Médailles qui conservent la memoire des principaux événements du règne de Louis XV. n. t. p. By G. R. Fleurimont.

Hubbard's Premium Coin List. By John M. Hubbard. Lake Village, N. H., 1887.

A brief account of the collection of coins belonging to the Mint of the United States, more particularly the antique specimens. By William E. DuBois. Philadelphia, 1846.

Descriptive guide to the numismatic atlas of Grecian history. By Benjamin Richard Green. London, 1829.

Silver coins of England arranged and described, with remarks on British money previous to the Saxon dynasties. By Edward Hawkins. London, 1841.

Numismata Cromwelliana, or the medallic history of Oliver Cromwell, illustrated by his coins, medals and seals. By Henry William Henfrey. London, 1877.

The Coin Collector's Manual, or guide to the numismatic student in the formation of a cabinet of coins. By H. Noel Humphreys. 2 vols. London, 1853. (Bohn's Scientific Library.)

Traité historique des monnoyes de France, avec leurs figures, depuis le commencement de la monarchie jusqu'à présent. Augmenté d'une dissertation historique sur quelques monnoyes de Charlemagne, de Louis le Debonnaire, de Lothaire & de leurs successeurs, frappées dans Rome. Par M. Le Blank. Amsterdam, 1692.

Medalische historie der republyk van Holland. By Pieter Mortier. Amsterdam, 1690.

Annals of the coinage of Great Britain and its dependencies, from the earliest period of authentic history to the reign of Victoria. By Rev. Rogers Ruding. 3 vols. London, 1840.

Illustrations of coins and medals. n. t. p.

Coins and coinage; the United States Mint, Philadelphia, history, biography, statistics, work, machinery, products, officials; rare pieces of gold, silver, nickel, copper, brass and their value, fully described and market price quoted. By A. M. Smith. Philadelphia, 1884.

The coins of the Bible and its money terms. By James Ross Snowden. Philadelphia. n. d.

An Essay on ancient coins, medals and gems, as illustrating the progress of Christianity in the early ages. By the Rev. R. Walsh, LL. D. Edition 2. London, 1828.

Catalogue des Médailles relatives aux evenements des annees 1789 à 1815. No author. No date.

Catalogue des Médailles relatives à la Revolution de Juillet 1830, et au règne de Louis Philippe 1^{ier}. No author. No date.

Kongl. Vitterhets Historie och Antiquitets Akademiens Månadsblad. Nos. 1 to 15. 1872-86.

Gift of the *Royal Academy of Belles-Lettres, History and Antiquities of Stockholm*.

Ohio Archæological and Historical Society's Publications. Vols. I to VII. 1887-99.

Gift of the *Society*.

Report of the Commissioner of Indian Affairs 1877 to 1899. 24 vols. Washington, 1877-99.

Gift of the *Commissioner*.

Ethnological Album of the North Pacific Coasts of America and Asia. Part I. American Museum of Natural History. New York, 1900.

By purchase.

EXCHANGES.

An exchange of publications has been made with the following institutions (in addition to those already noted) since the last issue:

Museo Nacional de Mexico.
South African Museum, Cape Town.
Bristol Museum and Reference Library, Bristol, England.
Diocèse de Lyon, Lyon, France.
Stavanger Museum, Stavanger, Norway.
Bureau of American Republics, Washington.
The Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.
Commissioner of Indian Affairs, Washington, D. C.
Kansas Academy of Science, Topeka.
Oneida Historical Society, Utica, N. Y.

DEPARTMENT OF ARCHÆOLOGY.

At the annual meeting of the contributing members of the Department of Archæology of the University of Pennsylvania, held in the Widener Lecture Hall of the Museum, December 28, 1900, upon the recommendation of the Board of Managers, the following resolution was adopted:

Resolved, That the words "and Paleontology" be omitted from the title of this Department, so that the title shall read "Department of Archæology," said amendment to take effect only after its approval by the Trustees of the University of Pennsylvania.

The above resolution was approved by the Board of Trustees of the University at a stated meeting held January 2, 1901.

NEW MEMBERS OF THE DEPARTMENT OF ARCHÆOLOGY.

The following have been elected to membership in the Department of Archæology of the University of Pennsylvania since the last issue of the BULLETIN, and down to January 1, 1901:

Adger, Miss William
Aldridge, Mr. G. W., Rochester,
N. Y.
Allen, Mrs. George N.
Allison, Mr. J. Wesley
Ames, Mr. James Barr, Cam-
bridge, Mass.
Ashhurst, Dr. Samuel
Aspiróz, His Excellency, Manuel
de, Washington, D. C.
Atkinson, Mr. Henry Morrell,
Atlanta, Ga.
Attwood, Mr. W. James
Ayres, Mr. S. G., Madison, N. J.

Babbitt, Miss Bertha
Bain, Mr. Robert E. M., St.
Louis, Mo.
Baird, Miss M. Louise
Bawn, Rev. John G.
Bazin, Mr. Henri
Beels, Mrs. Helen
Bernardy, Dr. Eugene P.
Bickers, Dr. A. Hubert

Bishop, Mr. Heber R., New York,
N. Y.
Bittinger, Miss Lucy F., Sewick-
ley, Pa.
Blackburne, Miss Emily L.
Bliss, Mr. Cornelius N., New
York, N. Y.
Bliss, Mr. Theodore
Booraem, Mr. J. V. V., Brook-
lyn, N. Y.
Bringhurst, Mr. R. R.
Bucknell, Mrs. William
Bulette, Mr. Lorenzo D.
Burnham, Mr. George, Jr.
Burr, Dr. Charles W.
Butcher, Mrs. Rosalie
Butler, Mr. Bayard
Byers, Mr. Joseph J.

Cadbury, Mr. Joel
Callaghan, Mrs. G. R.
Campbell, Mr. Edward, Ard-
more, Pa.
Case, Mr. Everett

- Chandler, Mrs. Charles W.
 Child, Mr. Henry L.
 Childs, Mr. Allen
 Clinton, Mrs. Edwin T.
 Coates, Mrs. A.
 Cobb, Dr. Arthur R.
 Cohen, Miss Mary M., Media, Pa.
 Conarro, Mrs. George M.
 Coombs, Mr. Robert Duncan, Sr.
 Coplin, Dr. W. M. L.
 Davis, Mr. Henry Gassaway,
 Elkins, W. Va.
 Dercum, Dr. Francis X.
 Donaldson, Mr. J. P.
 Douglass, Mr. A. E., New York,
 N. Y.
 Elkinton, Mr. Joseph S.
 Elkinton, Mr. Thomas
 Evans, Mrs. Louis Prevost
 Evans, Dr. William
 Faber, Mr. Hermann
 Forrest, Mrs. Molton H.
 Fouse, Mr. A. G.
 Fouse, Mr. L. G.
 Friebs, Dr. George
 Fulton, Mrs. R. H.
 Fulton, Mr. Samuel
 Futrell, Mr. William H., Haver-
 ford, Pa.
 Goodbread, Mr. Joseph S.
 Griscom, Mr. Walter
 Gwinn, Mrs. John
 Hare, Rt. Rev. William H.,
 Sioux Falls, S. D.
 Hawley, Dr. B. F.
 Hayes, Mr. James A.
 Hearn, Dr. Charles S.
 Heebner, Mr. Charles
 Henry, Mrs. Charles W.
 Hohl, Mr. August
 Horn, Miss Sallie M.
 Hoskins, Mr. Albert L.
 Howell, Mr. Edward I. H.
 Hoyt, Rev. Dr. Wayland
 Huhn, Mr. William H. Tevis
 Huneker, Mr. John F., Darling,
 Pa.
 Hutton, Mr. Addison
 Irvine, Mr. William B.
 Ivins, Mr. William
 Jackson, Mr. Milton
 Jones, Dr. John Jay
 Jones, Mr. Thomas F.
 Keely, Dr. Robert N.
 Kelley, Mr. John A.
 Kendig, Rev. Daniel
 Keyser, Dr. Naaman H.
 Krusen, Dr. Wilmer
 Ladd, Mr. Westray
 Lambert, Mr. James H.
 Langenheim, Mr. W. Paul
 Lewis, Mr. Henry M.
 Lewis, Dr. Louis
 Lillie, Mr. Lewis Converse
 Linsley, Mr. A. B.
 Lowber, Mrs. William
 McCormick, Mr. Laurence
 McEwen, Dr. Joseph W.
 McNaughton, Mr. John C.
 Magee, Mr. George W.
 Magee, Mr. James F.
 Massey, Mrs. A. L.
 Milnor, Rev. Charles E.
 Mohr, Dr. Charles
 Moore, Rev. J. J. Joyce
 Moorehead, Mr. T. S., East
 Waterford, Pa.
 Nelms, Mrs. C. W.
 Newhall, Mr. George M.
 Null, Mr. Watson M.
 Parrish, Mrs. Dillwyn
 Parsons, Mrs. John H.
 Peirce, Dr. C. N.
 Pelletier, Mrs. Constance, River-
 side, N. J.
 Perot, Mrs. Effingham, Ardmore,
 Pa.
 Pohlman, Dr. Julius, Buffalo, N.
 Y.
 Price, Mrs. Joseph M. P.
 Ritschl, Mr. G. F. Ferdinand
 Rorer, Mrs. Sarah Tyson
 Rutis, Mr. Affonso Arnoldo
 Samuel, J. Bunford
 Sank, Miss F. C.
 Scattergood, Mr. Thomas
 Sensenig, Mr. D. M., West
 Chester, Pa.
 Smith, Mr. Walter Bassett
 Snyder, Miss Ruth
 Starr, Mrs. Louis

DEPARTMENT OF ARCHÆOLOGY.

iii

Stewart, Mr. Charles H., St. David's, Pa.	Wilson, Mr. Henry W.
Stryker, Dr. Samuel S.	Wistar, Mr. C. Cresson
Sullivan, Mr. Jeremiah J.	Wood, Dr. Alfred C.
	Wu Ting-fang, His Excellency, Washington, D. C.
Taggart, Mr. Sylvester	
Tennis, Mr. E. A.	Yates, Mr. Arthur G., Rochester, N. Y.
Walker, Mrs. Juliet C.	Yerex, Mr. A. E., Chicago, Ill.
Washington, Mr. Booker T., Tuskegee, Ala.	Yerkes, Mr. Charles Tyson, Chicago, Ill.
Wernwag, Mr. C. T.	
Wickersham, Hon. James, Eagle City, Alaska.	Zell, Mr. T. Ellwood
	Ziegler, Mr. Harry D.



PLATE 8. Rock Veddahs.

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BULLETIN
OF THE
Free Museum of Science and Art
OF THE
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8

NOTES OF A TRIP TO THE VEDDAHS OF CEYLON.

India

BY DR. H. M. HILLER AND DR. W. H. FURNESS, 3RD.

The cousins Sarasin, two eminent Swiss explorers, who have made a most thorough study of the natives of Ceylon and Celebes, conclude that the Veddahs (the true aborigines of Ceylon) are one of the primitive types of the human race, and in spreading northward, gave rise to the Dravidians of lower India, and spreading southward, became the ancestors of the Australians. The concise article in the *Encyclopedia Britannica* (volume 24, page 120), states that the Veddahs, that is "hunters," probably represent the Yakkos of the Sanscrit writers, who appear to have been the aborigines and sole inhabitants of Ceylon prior to the Hindoo conquest.

These people, who still maintain their primitive mode of life in the jungles, are slowly dying out, and although at the time of the Dutch conquest of Ceylon, they were scattered somewhat thickly all over the island, now they are confined to the south-eastern districts, in the thickly wooded flat-lands, known as the *Bintenne*, in the Badulla and Nilgala hills, and on the east coast, near Batticaloa. Now-a-days, they are classed in three groups, according somewhat to the localities in which they live. Those living near the coast are by far the most civilized; they associate freely with their Singhalese neighbors, devote themselves to fishing, and, in appearance only, differ from the primi-

tive Singhalese living in the same region. These are known as the *Coast Veddahs*. Next in point of development are the *Village Veddahs*, living in the Bintenne (pronounced "Bintenny"), whose distinguishing feature is, that they make an attempt at building huts, and collect together in family groups; they are nomadic, and live in one place only as long as the natural products of the surrounding jungle are sufficiently plentiful to support their lazy existence. As soon as food becomes scarce, they move to another locality, and there live until the jungle products fail again. In the third group are those known as the *Rock Veddahs*, on account of their inability, or disinclination, or both, to build houses of any kind, and hence their mode of life in caves. They are the most exclusive of the three groups, and almost never come in contact with the Singhalese, and do not associate with each other in a tribal life, but band together only in small family groups. They live almost wholly by the chase, and their homes and haunts in the Badulla and Nilgala hills are in jungle so dense and over-run with wild animals that to them the Singhalese civilization, such as it is, never penetrates, and as they are now, so were they, it is safe to say, hundreds of years ago.

Limited as we were in time, remaining only a fortnight, from one steamer to another, on our way from Ceylon to Calcutta, we could make but a very hasty visit to the Veddahs; in fact, it was not until we reached Ceylon that we thought of seeing anything but the civilized side of the island. Our starting point was from Columbo, by train as far as Kandy, over a marvelously constructed railway that winds in and out and through and over the hill-tops, where at times one seems verily to overhang precipices, or to glide bird-like over the sunny valleys, which, laid out in miniature rice-fields or running wild in jungles of feathery foliage and soft-topped tree ferns, appear from the heights like beds of moss. Bird, beast, and flower seem to be resting, and in the terraced rice-fields covering the hill-sides and reflecting upward the wavy heat of the tropical sun, sleek and fat water-buffaloes with lazy ponderous movements, pulling the primitive wooden ploughs through the thick black soil, compose and complete a picture of tropical drowsy languor. Of a sudden the train is in a tunnel, light is shut off, but when



PLATE 9. A Singhaese Village.

we emerge the view, as in a magic lantern, is dissolved into undulating hill-tops, cleared of the forest primeval and of the charm of nature's "sweet disorder;" in its place are tea plantations with their lines of dark green bushes, set out in rows aggravatingly exact, on apparently unproductive mountain sides; the frame-built packing and drying houses, scattered here and there, make one think that while the train was in the tunnel, by a miracle, there has been a collision between the Orient and New England; but the train has merely emerged on the side of the hill best adapted to the growth of tea. At frequent intervals, the train (made up of cars of three classes of a modified French type), halts at stations where a crowd of passengers awaits it, composed of sleek-looking Singhalese, whose dusky bronze contrasts becomingly with their white clothing, which consists of a skirt of cotton cloth, fastened at the waist, and hanging straight to the ankles, like the Malay *sarong*, and a jacket, also of white linen or duck, and, more important than all, an old cotton umbrella of the Birmingham vintage of '61. The costume of the women is exactly the same as the men, except that their jackets fit closer, and are made of a little thinner material. As soon as the train stops, there is almost a panic in the group, with a wild rush for places in the cars; the noise made by the scraping of sandals and horny bare feet on the station platform, almost drowns the puffing of the engine; small boys clad in hardly more than their birthday suit, dart in and out among the bustling crowd, carrying trays of "grubious" looking sweetmeats, bananas, small sections of sugar-cane and other delicacies dear to the palates of Singhalese travelers. Native conductors, Europeanized to the extent of a hair-cut and a blue suit with brass buttons, lord it over all, and when the idea strikes them, they in turn strike with an iron bar a fragment of steel rail, suspended from the roof of the station shed. When the excitement has pretty much quieted down, and the natives are uncomfortably ensconced under their piles of belongings in the railway carriages, the guard beats again, violently, on the railroad iron, waves his arms madly at the engineer, and after about ten minutes the train starts and moves on through more vistas of peaceful valleys and busy plantations, and finally pulls in at its terminus in the old capi-

pal,—Kandy. The city is built beside an artificial lake, or reservoir, which must have been constructed before the fourteenth century; it is mentioned in Buddhist history, that, at about this time, a temple which now stands on the edge of the lake was built to contain a most sacred relic of the great Buddha, one of his teeth. The tooth was brought to Ceylon in A. D. 311, concealed in the folds of a princess's hair; it was afterward stolen by the Malabars; recovered by a Kandyan king; kept hidden in the temple at Kandy until 1560; captured by the Portuguese; and finally burned at Goa, by the archbishop, in the presence of the court. A duplicate was made out of ivory by a later king of Kandy, and if the copy be true, Buddha was a great, a very great man, but his personal appearance, if he had a set of such teeth, must have been against him. His tooth in size and shape resembles a large forefinger. It is kept in an upper room of the temple, in a pyramidal shrine, about three feet high, of solid gold, studded with most superb jewels, the offerings of princes and nobles in all the countries where Buddha is worshipped, and devoted pilgrims from those countries come every year to adore this sacred, second-hand relic. Every evening at six, the doors of the room wherein the shrine is kept are thrown open to the devout, and the air becomes heavy with the scent of the frangi-panni blossoms, which the prostrate worshippers, male and female, as they murmur their prayers, shower in front of the glittering pyramid. Two hundred thousand dollars would be a low estimate of the value of the gold and jewels of this shrine. The tooth itself is shown but once a year, in the great procession during the spring months.

The town of Kandy is not picturesque; it is laid out in straight streets lined with single-storied houses of reeds or bamboo strips plastered with mud and a coating of whitewash or stucco, turned green and spotty with age, dirt, and damp. Children swarm in the streets; cows, dogs, and ponies stray where they please; and in the shops are to be seen only the usual style of goods carried by humble Oriental shopkeepers,—printed calicoes from Birmingham, fourth-rate hardware from Sheffield, bowls, lamps, and tumblers of pressed glass, and coarse china from goodness only knows where.



PLATE 10. A Singhalese Ferry-boat.

At Columbo we could get no information concerning the whereabouts of the Veddalas, except that there were several villages of them in the Bintenne forests, which were most easily accessible from Kandy; further than Kandy, no one seemed to have the slightest idea of roads, trails, or villages, and unfortunately for us, the director of the Columbo museum, who was said to be the only man who knew all about the wild tribes, was absent on leave. Fortune did favor us, however, by throwing in our way a very intelligent Singhalese courier and hunter, named Piris, a Roman Catholic by faith, and full of energy by nature.

After enjoying the sights of Kandy for two days, and gathering more definite information as to where we were going, we dispatched in a huge, lumbering cart, drawn by two bullocks, our factotum, Piris, a lanky cook, and our store of tinned provisions. This slow-going caravan was to make the best time it could over the twenty-eight miles between Kandy and the last rest-house on the cart road to the eastward, at a place called Madagoda; there we had to engage coolies to carry our stores, etc., for beyond Madagoda there are only bridle-paths.

We left Kandy the day after, in a sort of wagonette drawn by two Australian horses. Our first stage was to the "Rest-House" in the village of Teldenia, over a hard, well-built road, most of the way over-arched by trees, and as far as Teldenia, running through a fairly populous country, cultivated with groves of cocoanut, cacao, and coffee. At the Mahawelli River we were ferried across on two dug-outs, fastened together with a bridge of planks. At the Rest-House we baited our horses and ourselves.

The excellent system of "rest-houses" and "government-bungalows" extends all over India, from Point DeGalle in Ceylon to the vale of Cashmere. They are built especially for the accommodation of the government officers on their travels, but all travelers may use them. They are usually provided with bedsteads, tables, chairs and a tin bath-tub, and sometimes are supplied with crockery and glass, and a small supply of tinned provisions and aerated waters. They are almost always in charge of a keeper, who collects a small tariff, and presents a

record-book, wherein may be entered the amount of money paid, and also words of praise or complaint. We learned from these records, sometimes in verse, that when at a loss to know exactly what to say, it is safe to complain of the leaky roof, and mention casually an attack of rheumatism. Some bungalows are really comfortable hostelrys, as at Teldenia; others are but roofs and walls.

A curious feature of the landscape, especially along the roadside, is the large ant-hills, sometimes four or five feet high, looking like gigantic pyramidal sponges, but to our very great surprise, as firm as if made of cement. On the very apex there is usually to be seen a chameleon, fourteen or fifteen inches in length, standing motionless, with his head high in the air, and always adapting his complexion to the color of the ant-hill on which he rests. The natives warned us not to go near them, because they say that cobras frequent these ant hills, and prey upon the chameleons who come there to feed on the ants, a striking instance of the biter bit.

When once among the hills, the views from some of the passes can hardly be excelled for beauty of tropical mountain scenery. Many of the mountains are terraced almost to their very summit with lush fields of sprouting rice, of the lovely, translucent green of early spring, and far below the thatched or tiled roofs of villages peep out through the groves of palm; the views widened the higher we ascended, and new glories of scenery, with range on range of mountains, appeared as we turned each spur of the hills. Late in the afternoon we arrived at the Madagoda rest-house, the end of our ride, where we found Piris and our caravan.

The Madagoda rest-house, at some distance from the village, is a comfortable little three-roomed bungalow, standing on a narrow ridge and dividing one valley from another, northward and southward; these deep valleys, partly wooded, partly cultivated, stretch away to the dim distance, where they are shut off by a line of rugged and hazy mountains. In the evening we received a visit from the head-man of Madagoda, who promised to send us, early the next morning, carriers who would stay with us till we returned. After an early start the next morning we soon came to the



PLATE II. Terraced Water-fields of Rice.

village of Madagoda, where the head-man again met us, accompanied this time by a deputation of villagers. With many ceremonious bows, he gave us a letter to his brother, the head-man at Bintenne, and then to each of us he presented a package of cardamom seeds, excellent for allaying thirst on a long walk. To display their familiarity with English customs, the assembly shook hands with us at parting. Several hours of brisk walking through charming open jungle brought us to the "Galle-pada-hula," or "Pass of a thousand steps;" the mountain chain here ends abruptly, and fifteen hundred or two thousand feet below, the flat forest lands, or Bintenne, extend to the horizon; here and there in this broad sea of green, where the tree-tops look as if they had been trimmed with a lawn-mower, patches of lighter green or brown mark clearings for rice-fields, and distant glints of water show where the large artificial lakes or tanks have been constructed to hold the supply of water for irrigating these fields. Almost directly down the centre, the Mahawelli River, as it flows northward, makes a straight line of shading among the trees. The silence is impressive, perhaps oppressive; at high noon only occasional puffs of hot air, smelling of leaves, damp moss and mouldering tree-trunks stir the branches at the top of the pass. The path here dips down abruptly, over rocks and boulders, going down from stone to stone, like stairs, until lost in the woods below. Forest fires had swept this part of the mountain, and for an hour we scrambled down over smooth boulders, under the full glare of a tropical noonday sun, until we reached the flat jungle. At last we arrived at the river, and a rest-house at the small village with the large name of Waragantotta. The head-man of the village came to greet us with such exuberant welcome that in his eagerness he did not take time even to adjust under his Singhalese skirt the shirt which he had donned in our honor; while we were talking, however, he was correcting this trifling detail, and before we left, a coat, a deer-stalker cap, and a large pair of blue goggles, were hastily brought to him from his house, to complete his toilette. He was the soul of politeness, nevertheless, and despite the fact that we had no interpreter, and knew no word of Singhalese, he gave us to understand that we were welcome. Piris and the baggage

train, grunting and puffing under their loads, came up half an hour later, and as the men removed their burdens from their heads, their necks seemed to stretch up an inch or two. We crossed the Mahawelli again on a pontoon ferry to the village of Alutnuwera, directly opposite, where we found a government bungalow, far better than that at Waragantotta.

Here is the remnant of a large city, founded on this spot two hundred or more years before the Christian era, and the huge brick dagoba, or memorial shrine of Buddha, now standing in ruins at one side of the village street, bears evidence, with its crumbling brick and stone, of its great age. We were informed by the custodian of the rest-house (a devout old Buddhist who shed genuine tears because we killed a large scorpion in one of the bedrooms) that there was a settlement of Village Veddahs near the "*Horra-bora*" tank, or reservoir, in the jungle, about six miles from Alutnuwera; but the Rock Veddahs live further away in the forests, making their homes in caves. They are very shy, and hard to find, and hide upon the approach of strangers. The head-man sent us two villagers, who knew the language and haunts of the Rock Veddahs, whom they said were at present living about twenty-five miles away; it would require at least thirty-six hours to find them and bring them to us; it was useless for us to set out to try to find them in the short time at our disposal. At three o'clock on the day of our arrival, the two men started into the Bintenne forests, to search for these savages, and we hardly hoped for success. They, however, were confident that they could find them, and dreaded only the danger of attack by wild animals. Even the Veddahs, they said, kept fires burning all night, to scare away beasts of prey, and they told tales of rogue elephants, and troops of man-stealing monkeys, and hordes of evil night-spirits, in the dark jungles. All this was assumed to make their service and their reward the greater. True to their word, however, on the day after our return from a visit to the Village Veddahs, they did manage to bring to us at Alutnuwera, a Rock Veddah head-man and four followers, all men. They were induced to come by being told that there was a great white Prince who desired to visit them, but who was unable to walk further than Alutnuwera. They spent the day with us, and we kept the old head-



PLATE 12. Votive Offerings Constructed by the Primitive Singhalese at the Time of the Harvest Festival.

man busy by asking, through an interpreter, a multitude of questions. We were unable, through lack of preparation and of time, to go back with them to see their habitations.

The morning after our arrival at Alutnuwera, we set out for the Horra-bora tank, to see the settlement of Village Veddahs. In the dry rice-fields, just outside of a primitive Singhalese village, about two miles from Alutnuwera, we were attracted by two very prettily built frame-work structures, which had been used the night before in the annual "devil-dance," or harvest festival. Once a year, at about the time the rice is sprouting, they construct these altars, of palm and pineapple leaves, bamboos, and the white leaf stalks of the plantain, and place thereon offerings of food—rice and fruit—for the demons. The evil spirits, who might do injury to man or his crops, are placated by these offerings, and out of gratitude, do not visit their wrath upon the village. The head-man said that he and the villagers had danced all night, from sundown until sunrise, with devotion entirely undampened by the torrents of rain. The ashes of the fires were still smouldering, and the offerings of food were as yet untouched by the demons, and many of the villagers were nodding in front of their houses.

The idea prevails among the Singhalese throughout Ceylon that the Village Veddahs are quite unlike the Rock Veddahs; in fact this village head-man told us that it was not worth while to go four miles further to the upper end of the tank to see the Village Veddahs, because they were just like the Singhalese; the only difference between the races was that the Veddahs were hunters (the word Veddah in Singhalese means *hunter*). He tried hard to dissuade us from going on, but we were not to be dissuaded, and proceeded on our journey, following the canal which conducts the water from the tank to the rice fields.

The last Kandyan king, about a century ago, dammed the stream which here flows between two low ranges of hills, and created the Horra-bora lake or tank. This dam which he built is about three hundred yards long, and sixty feet high; very broad at the base, and thirty or more feet broad on top, there is now along its whole length a row of big ficus trees. The lake thus formed is about half a mile wide, and from one to two miles long. On its surface, ducks and divers in large

flocks disport themselves, crocodiles bask lazily in the sun on inviting rocky isles, lotus and other aquatic plants grow in profusion far beyond the shore line, and the wild animals infesting the forests surrounding the tank find here "good hunting," unending supplies of fresh water to drink and cool shade.

We followed the jungle path along the eastern shore of the lake, sometimes over outcrops of granite, or down by the lake-side, close to the big pads and blooms of the pale yellow lotus, and after following our guide through thick undergrowth for half an hour, suddenly, and without warning, we came out into a cleared space, where there was the merest excuse for a hut, and beside it a man and a woman squatting side by side and cooking something in a blackened earthen pot, which rested on a fire of twigs and branches; a little beyond them were more huts and more women and children—lo! the Village Veddahs. The elderly man and woman whom we first saw had between them scarcely a yard of coarse cloth as clothing, their hair hung loose in disheveled twists and strings about their faces, and they both squatted so low that their knees stood up above their shoulders. But the most impressive thing about them was their unhuman apathy and utter lack of interest, a peculiarity of the lowest types of man. Although we came upon them most unexpectedly, and although, as they told us later, they had never before seen white people, nevertheless, neither of them showed the slightest astonishment or interest in our appearance; both glanced up for a second, and then cast down their eyes, and continued silently shelling the seeds out of the lotus pods beside them, and stirring the simmering pot over the fire. Near the other huts, women and children were occupied at the same task; some were sitting on the ground around a pile of lotus pods, others were attending to the cooking. At first the children seemed a little frightened at us, but contrary to expectation, did not rush off to the jungle. The name of this village was Makulugulla, which translated, means "plenty of bugs." No doubt it justifies its name. The government demands a name for each village, for purposes of record, and this name was the head-man's own selection. In order to be considered civilized, and receive redress for wrongs, each adult



PLATE 13. The Head-man of the Village Veddahs at Makulugulla.

male Village Veddah must pay a tax of one rupee or fifty cents per annum. How they were to obtain even this small sum seemed an insoluble problem, but they explained that they borrowed the money from the Singhalese, and then worked out the debt as porters or cultivating maize fields. This village consisted of about twenty-five Veddahs, of which seven were taxpayers, the remainder being women and children.

At the time of our visit there were but three men and seventeen women and children in Makulugulla; these were distributed in five shelters or huts. The chief's house was made of four upright posts and a flat thatched roof of palm leaves, but without walls or flooring. The other huts were shaped like **A** tents, one was thatched with coarse grass, the other covered with large circular leaves of the lotus. The remaining two huts were shaped like wall tents, the roofs of grass or palm-leaf thatch, and the walls of bark. They all had dirt floors and not one of them was over eight feet square. In three of the huts the utensils, such as earthen pots, baskets, gourds and mats, were piled on the ground at one end; in only two were there any shelves. The floor of each, however, was neatly swept, and even outside the huts, where all but the aged and the very young slept, the ground had been swept clear of leaves and twigs.

The cooking was all done out of doors, at a fireplace consisting of three stones; and the cook was honored by having a seat, either a block of wood or the dried skin of the Axis deer or the Muntjac. We were also surprised to see their providence, in that they had quite a good-sized bundle of dry firewood on store in the huts. We expected to find the village reeking with refuse and decaying game, of which we heard that they were fond, but the place was free from smells, and really clean. The jungle at this spot was composed of large trees and sparse undergrowth, so that it was an ideal place for a camp, within easy distance of water. They may remain at this place three or four months, or even longer, before they seek a new village site, but probably they never go far from the Horrabora tank, on account of the great supply of lotus and other seeds which the lake affords.

In general appearance the Rock Veddahs and Village Ved-

dahs were alike, and the following description answers as well for the one as the other.

Full grown male Veddahs stand about five feet high; they are in general quite erect, of slender build, and with the thigh, and especially the calf, undeveloped. Their color is a dark brown, somewhat darker than the ordinary olive-brown of the Singhalese. The hair is jet black, very wavy, often curly, but never kinky, and hangs loosely down to the shoulders. The men part their hair in the middle and let it hang down over the ears, the women tie theirs in a knot at the back of the head.

In nearly every house, we saw a bundle of hair, or a switch, which they told us was worn for ornament by the women, albeit none of them seemed to have the slightest tendency to baldness. The eyes are a dark brown, and the iris seems to merge indistinctly into the white. The Singhalese say that the Veddahs have eyes like monkeys, because their eyes are red, and they always look down or stare straight before them; this is in part true; they do stare straight before them when they are sitting quietly, and at such times their faces are utterly expressionless, as though their minds were absolutely vacant. Their noses are straight, slightly broad at the base, but the nostrils do not open so directly forward that you can see into the nasal cavities, as is the case with the Mongoloid races; nor is there marked prominence of the malar bones. The lips are not very full, nor recurving, and form straight lines when the mouth is closed. The forehead is straight, and the facial angle not strikingly acute; in short, their features are decidedly more Hindoo than Negroid or Mongoloid. The chest, shoulders and arms seem fairly well developed for bodies so slender, and the skin is smooth and healthy in appearance. Their teeth seem to be marvels of soundness, although much discolored; the head-man, who was probably, from appearance, fifty-five or sixty years old, still had all his teeth, and apparently not a cavity in any one of them, although the molars were much worn, leaving but about half of the crown remaining. We were led to this dental examination by attempting to crack with our teeth the dry lotus seeds which they offered us, and finding we were unable to crush them without danger to our molars; the Veddahs were, without effort, crunching these seeds all day



PLATE 14. A Village Veddah Family.



PLATE 15. Village Veddahs Picking the Seeds from the Lotus Pods.

long. Some of them seeing our difficulty, were kind enough to crack the nuts for us and offer us the kernel from their mouths.

For their food, the Village Veddahs rely chiefly upon fruits and seeds, the latter we found to be the staple at Makulugulla. These seeds were of two kinds, the green and the dried seeds of the yellow lotus, and the small seeds enclosed in the pod of another unidentified aquatic plant. This pod is about the size of a Mandarin orange, and inside there is a multitude of small, round seeds, which, when boiled, look and taste not unlike Chinese millet. It is this seed that they seem to keep for ever boiling over the fire; the lotus seeds they crack and eat raw, and in this state, they are about as digestible and palatable as raw chestnuts. Although they live near these lakes abounding in fish, they are not fishermen, and so far as we could learn, only indulge in fish as a diet when chance throws a dead fish in their way. In one of their small earthen pots, we saw a quantity of mushrooms, and the Rock Veddahs brought us presents of honey and half-decayed fruits, which were far from savory, and which we refrained from tasting. These few articles seemed to be their only fare, and the Village Veddahs at least, appear to be strict vegetarians; securing food is, of course, their chief occupation, and when once a fair store is obtained, they rest and eat until all of it is consumed; their diet is well suited to their inactive lives.

From the Rock Veddahs, who were brought from their caves to visit us at Alutnuwera, we learned that they live mostly upon meat; they are able to kill birds and other animals with their bows and arrows; and we heard that they do not mind how high their game becomes before they consume it, hence they have no objection to long storage. It is also stated that they do not kill the wild buffalo, of which there are many in the Bintenne forests; this we are inclined to think is a belief fostered by the Hindoos, who maintain that the Rock Veddahs, on account of their isolation, are of a very noble caste, and would hold the killing of cattle as an outrage. They are said to be able to secure the elephant by shooting arrows into the spongy part of the foot, as he walks or runs, and when he becomes too lame to go further, they then dispatch him.

At Makulugulla we found them all engaged, as we have said,

in hulling the lotus seeds, and for a short time our arrival interrupted the proceedings, but every now and then some of the men or boys, overcome by hunger, would draw apart from the others, and resume their meal, cracking the dried nuts between their teeth or between two stones, and eating them diligently. When the chief was asked whether or not there were special times during the day when they ate, he replied, "They crack one nut and eat it, then crack another and eat it, never moving until they are all gone," then, after a pause, he added, "and sleep there, too." They eat their fill, or until fatigued, lie back and sleep, awaken, and begin their repast again until the store of pods is all empty. Then, to get up another appetite, they go to the lake for a new supply. They do not smoke tobacco, but for stimulant, they chew betel nut, and each man carries his supply in a small bag, which is held close up in his arm-pit by a short strap passing over the shoulder on the same side.

The men wear a very simple garment, about three yards of calico being sufficient to form a loin-cloth. Sometimes when cloth is scarce, it is never plentiful with the children, a strip or string of bark around the hips, holds in place a narrow band of cloth, which passes between the legs, while the ends of the cloth, tucked under the string, hang down in front and behind for five or six inches. The women wear a piece of calico fastened about the waist like a Malay sarong, and hanging down about to the ankles. To this, at times, is added another strip, covering the breasts. The young children go quite naked. There was not a real garment, nor a very large quantity even of the old, soiled cotton cloth in the whole village. The Rock Veddahs used that part of the loin cloth which encircles the waist as a pocket; betel nut, food, etc., being twisted into its folds. This girdle also acts as a belt, through which they thrust the handles of their axes when they travel in the forest. We did not see a hat, nor anything which could masquerade as a hat, either among the Village or the Rock Veddahs.

None of them is tattooed, and they wear very few ornaments. Both sexes, however, perforate the lobe of the ear, and through the opening pass a wire, strung with beads or seeds. The women sometimes enlarge this perforation, and wear in it a



PLATE 16 A Village Veddah Boy.



PLATE 17. A Rock Veddah Drawing his Bow.

plug, made by rolling a strip of palm leaf into a cylinder, from one-half to an inch in diameter.

We got from them one of their earthen bowls that had rough patterns drawn upon it, but saw no other evidence of artistic ability. They make coarse mats and baskets of reeds and strips of bamboo, and use gourds and cocoanut shells for water bottles and cups. Spoons and ladles they make from a piece of cocoanut shell, with two holes, on one side, and a stick thrust through them to form a handle. They make their own bows and arrows, but the leaf-shaped arrowheads, and the iron axe-heads which they use, are made by the Singhalese, who trade them to the Veddahs in exchange for game or jungle products. The axe is the weapon with which they protect themselves against bears and other wild animals and they never travel without it. The Rock Veddah name for an axe is "galraki;" of a bow, "malali;" of an arrow, "moriankatu."

We had heard varying accounts of their wonderful proficiency with the bow and arrow, and consequently asked for an exhibition of their skill, but we have no hesitation in pronouncing them only indifferent marksmen. A leaf two and a half inches broad was placed against a tree for a target, and at a distance of eleven yards, five Rock Veddahs took two shots each at it; not an arrow touched the leaf, and one missed the tree. There was not a single bow in the village of Makulugulla, but while we were there one of the men went to a village near by and brought one, but the darts, although feathered, were not metal tipped. The Village Veddahs were even less skillful than the Rock Veddahs, and the old chief himself tried many shots without once hitting the mark. In shooting, they draw the hand back to the ear, holding the fingers to the string, as we do. The bow is fairly stiff, they string it by placing one foot upon it, while both hands are occupied in putting the string in the notch at the end. They have no quiver, but carry their extra arrows in their hand, and while shooting, they hold these arrows between their knees or thighs. The bow which we bought from the Rock Veddahs was relinquished under protest, it was old and blackened from long use, and before parting with it, the chief unstrung it, and tenderly and carefully twisted the cord about it; the old hunter evidently had fond

associations with it, and was giving it his last caress. Another incident, which made us feel that these outlandish waifs of humanity are not unacquainted with the tribulations of civilization, occurred when we were accepting the presents offered to us by the chief. The earthen pot containing the honey, which alone, and not the pot, he brought as a present to us, was sent to our cook to be emptied into a jar; the old man saw the coolie carrying the pot away, and he fairly roared with excitement, and bubbled over with speech, to the effect that if he went back without that earthen pot, his wife would make it miserable for him. They seem always to talk in a high excited key, and in a most vehement manner, and whenever our interpreter was discussing any subject with them, we invariably thought that they were coming to blows. They are by nature so exceedingly taciturn and apathetic that when they do make up their minds to talk, the words seem to come in an irrepressible torrent and from lack of practice, they are apparently unable to appreciate modulations of the voice.

They obtain fire by rubbing together two pieces of wood, but were unable to do so when we asked for a demonstration, because they said they had not the proper kinds of wood at hand. However, we prevailed upon them to go through the motions, and found that their method was none other than the well-known "fire-drill," used by primitive people in many other countries. It consists of one stick being held upon the ground with the feet, and then another stick twirled rapidly between the hands, so that it bores into the stick on the ground, and the friction produces fire in the fine dust that is rubbed up. Now-a-days, the Village Veddahs use matches, and whether or not there is any religious significance still attached to the primitive method of making fire, we could not ascertain.

They seemed to have little or no idea of a religion, but have a firm faith in charms against all dangers. In the chief's hut at Makulugulla we found a book made of palm leaves, after the pattern of the sacred books in Buddhist temples; it was filled with various charms, written in old Singhalese characters. Among these charms was one emphatically approved of by our Singhalese followers. It consisted of a short sentence, naming



PLATE 8 A Rock Veddah making Fire with a "Fire-drill."

various parts of Buddha's garments, and this sentence should be repeated three times upon meeting with a bear. If Balu, the bear, whose reputation for ferocity is very generally accepted, waited long enough to hear the third and last repetition of these mystic words, he would never attack, but would turn and run. Piris, our servant, Roman Catholic though he was, firmly believed in the efficacy of this charm, and the old rest-house servant (the same who wept over the crushed scorpion), a Buddhist, besought the Veddah chief for a copy of it. Another object for the working of charms and for purposes of divination we found in the shape of a stone, tied about with a piece of bark. This divining-stone is consulted in cases of sickness, to ascertain whether or not the wishes of the invalid are heard and will be granted. When the Veddah offers these prayers, he holds in his two hands a stick, from which the divining-stone is suspended; if his prayer is heard, the stone will swing to and fro like a pendulum; if the evil spirit does not hear, or will not grant his prayer, the stone remains at rest. We asked for this talisman, and it was given without a murmur of reluctance; we inquired if another could be obtained to supply its place, and the answer was, "Oh yes, there are plenty more in the forest." Leading us to infer that almost any stone could be used as a spiritual interpreter.

We saw no musical instrument at the village where "bugs are plenty," nor did we expect to find any musical tendencies in so silent a people; but when we asked the chief of the Rock Veddahs if they knew how to dance, he at once sat down on the steps of the rest-house, and his four younger followers took their places in the roadway. Then the old chief sang or chanted in a dismal minor key, and the men, keeping step with the chanting, twisted and turned, and stamped the earth alternately with the heel and the ball of the foot. Their arms hung loosely from their shoulders, and swung with the motions of the body; their eyes were fixed on the ground at their feet, and their hair was shaken forward, half obscuring their faces. The old chief nodded his head to the measured time of the dance, and clapped his hands, to which the dancers responded at times by voice, or by clapping their hands. There were various figures, and the change in the tune, or a pause in the song, called for a

new method of stamping or twisting; the four dancers seemed independent of each other, while following out similar figures, twisting in and out close together, but never touching. At the conclusion the performers were perspiring profusely, and seemed exhausted and quite dizzy, but at no time did they show any interest in the audience, nor did they seem to realize that they were performing for the benefit of any one but themselves. The utmost solemnity was maintained throughout the dance; in fact we do not remember to have seen the slightest sign of mirth or laughter during our whole acquaintance with the Veddahs.

When we left the village of Makulugulla, the chief and a boy came back to the rest-house with us, and we bought a piece of cloth for every individual in the village, and gave them money wherewith to pay their yearly taxes. The chief was much pleased, and after being reminded by the rest-house keeper, he salaamed to each of us in turn, as he repeated his thanks, then hoisted the bundle to his shoulder and started homeward an hour before sunset. There must have been some slight but solemn jubilation that night around the fires, and perhaps some of the pots of seeds burned for lack of stirring. To the Rock Veddahs we gave money, which the old chief received in his two hands, looking at it with an unchanged expression. After a few moments' silence, he turned his eyes on his men, and from them on the bows and arrows, and then on the axe, which he had given us, and then his pent-up feeling burst forth in excited speech. He wanted recompense for his presents, and saw no value in the silver we had given him. It seemed sufficient to all the Singhalese, who out of curiosity had gathered round and were looking on. Seeing that he was disappointed, we generously presented him with all our empty tins, exhausted bottles and useless boxes, which to him seemed veritable treasures. He had asked for money, instead of cloth or foodstuffs, possibly instigated thereto by the traders, who anticipated fleecing him out of most of it within the hour.

When we had plied our visitors, the Rock Veddahs, with all the questions we could think of, and after the photographing, the dancing, the shooting match and the trading were concluded, we started on our return; before we had gone half way



PLATE 19 The Dance of the Rock Veddahs.



PLATE 20. Rock Veddah Youths.

down the street, the chief, followed by each of his men in turn, grasped our hands, wished us good luck or words to that effect in Veddah language, and turned off abruptly at right angles, to return again to their rocks, their beds on the ground, and to the ceaseless struggle for existence, with the odds in favor of famine, sickness, and wild animals.

CATALOGUE.

The following collection from the Veddah, unless otherwise noted, of the village of Makulugula, Bintenne Forest, collected in August, 1899, has been presented by the collectors, Messrs. Furness, Harrison and Hiller.

- 22,083. Iron axe, with handle. (Rock Veddah.)
- 22,085. Iron adze.
- 22,086. Pillow. A flat coil of coir, $8\frac{1}{4}$ inches in diameter.
- 22,087. Spoon. Section of cocoanut shell, with flat wooden handle stuck through two holes in bottom.
- 22,088. Cocoanut shell cup.
- 22,089. Charm stone. Irregular fragment of sandstone, bound with bark cords.
- 22,090. Rudely made flat bowl of coarse earthenware. Diameter, 9 inches.
- 22,091. Shallow pottery bowl. Interior marked with incised scroll designs. Diameter, $7\frac{1}{4}$ inches.
- 22,092. Bowl or pot of coarse earthenware. Diameter at top, $6\frac{1}{2}$ inches. (Rock Veddah.)
- 22,093. Gourd vessel, bound with bark cords.
- 22,095. Ear plugs. Made of coiled strips of palm leaf. Pair, small, worn by girl; and single, larger one of pair, worn by woman.
- 22,097. Bow and two arrows. Bow ovoid in section, with string of twisted bark. Arrows, with wooden shafts, feathered with three feathers, and large leaf-shaped iron points. Length, bow, 63 inches; length, arrows, 34 inches. (Rock Veddah.)
- 22,098. Bow and two arrows. Similar to above, but the arrows have simple, sharpened points. Length, bow, $60\frac{1}{2}$ inches; length, arrows, 30 and 36 inches.

Messrs. Furness, Harrison and Hiller have also presented six tinsel flowers (?) $\frac{5}{8}$ of an inch in length, offerings made by worshippers on first visiting the shrine to Buddha near Columbo.

A SUMMER TRIP AMONG THE WESTERN INDIANS.*

(THE WANAMAKER EXPEDITION.)

BY STEWART CULIN.

CHAPTER II.

IDAHO: FORT HALL RESERVATION, BANNOCK; UTAH:
UINTA VALLEY RESERVATION, UTE; NEVADA: PYRA-
MID LAKE RESERVATION, PIUTE.

From Rawlins we went to Ogden and thence to Pocatello and Ross Fork, Idaho, to visit the Bannock at Fort Hall Agency. The Fort Hall Reservation has an area of 1,350 square miles and a total Indian population of 1,495 (Report of 1900),† of whom, according to the Report of 1899, 430 are Bannock and 1,016 are Shoshoni, both of the Shoshonian stock. As we had studied the Shoshoni at Washakie, the Bannock were the chief object of our visit.

In his report for 1897 the agent stated that, although the two tribes had lived together in friendly relations for nearly thirty years, they are still separate and distinct in regard to appearance, language, disposition and character. "They seldom intermarry. The more turbulent and aggressive nature of the Bannock makes them the dominant tribe, although numbering but little more than one-fourth of the total population. The Shoshoni take kindly to labor and are more disposed to settle down, while the Bannock are of a roving, idle, improvident disposition, but little inclined to engage in civilized pursuits."

We started out from the agency at about nine in the morning, I on an Indian pony and Dorsey, with an Indian as interpreter,

* Copyright by Stewart Culin.

† The agent states in his report for 1900 that this is the first time that the Bannock and Shoshoni tribes have been reported together, the population of the two tribes having always been reported separately. They are so intermarried and related to each other that it is nearly impossible to distinguish one from the other, many individuals being offspring of intertribal marriages.

in a buckboard. We drove nearly north up the cañon, visiting in turn the Indian houses and tipis. Our interpreter, Joe, was a Bannock, it being our intention to visit the Bannock lodges. The Indians had removed most of their belongings from their cabins to canvas tipis erected alongside of their winter quarters. They seemed miserably poor compared with the Shoshoni at Washakie. They have little or no buckskin, having been deprived of the right of hunting which was accorded them by treaty at Jackson's Hole in Wyoming, where they were in the habit of making annual excursions. The women wear moccasins and blankets, but the men have abandoned their old costume, and everywhere we found a lack of personal ornaments such as are common among the Shoshoni at Washakie. Their native industries have nearly disappeared. The women do a little beadwork, but it is inferior to that done at Washakie, and they import most of what they have from other tribes.

Their houses are the same as at Washakie, with canvas tipis erected near by for summer residences. The women dig kamas with pointed sticks, and stone hide-scrappers and pounders were common about the dwellings.

They cultivate some 1,800 acres out of the 864,000 acres comprising the reservation. Their lands afford fine pasture and the Indians raise considerable stock, supplying a large part of the beef issued to them by the government.

Seven thousand horses and ponies, or five to each man, woman and child are reported among their possessions. They are so numerous as to impair the grazing properties of the reservation. These ponies are said to be practically worthless, but the agent states that the Indians think more of one pony than of ten steers, and he sees no way to get rid of them except by breeding to large stallions and thus increasing their size and working qualities. Among the Yakima, in Washington, I found such ponies sold by the thousand head to canning factories.

It was the opinion of the intelligent clerk at the agency that the partition of the lands would be disastrous to the Indians, as thereby the cattle range, their chief source of revenue, would be destroyed. At the same time they would be unable to support themselves by agriculture. He favored the allotment, if in some way the range could be retained.

Our destination on our morning ride, was the cabin of Jim Ballard, the chief of the Bannock. We had nearly reached his ranch when the tongue strap on Dorsey's wagon broke and the team ran away. Personally, I feel much more secure on a horse than in a wagon. The stolid Indian horses started across the sage bush, developing a wild fury that was amazing. The wagon was tossed high in the air as its wheels struck the clumps of bushes, and, in an instant, the Indian was thrown out, Dorsey remaining, and trying in vain to reach the lines. Round and round the horses went in diminishing circles, when at last, just before a final crash, Dorsey went out and a moment after the wagon went over and was dashed into fragments. Fortunately no one was injured. The whole affair was over in less than a minute. I dismounted and assisted in collecting the pieces, including the remains of a fine woman's saddle that I had purchased at an exorbitant price a short time before. After some delay, Joe procured a government farm wagon, into which we loaded the débris, and undismayed, we went on to Ballard's.

The chief lived in a comfortable new house, and had his son, a very good-looking young fellow, with him. He sold me a pair of very fine Sioux moccasins, having uppers decorated with porcupine quill work and soles covered with beads. Ballard described them as riding-moccasins, and the beaded soles would have rendered them unsuitable for ordinary wear. Elsewhere I was told such moccasins were known as "spirit" moccasins and were kept by their owner to be buried in. The chief had a dance-drum constructed from half a cask, with a head covered with painted hide, which had been made by a band of Omaha, eight in number, who had recently visited the reservation. Our trip to the Bannock was, generally speaking, unproductive. I was particularly interested in a game which was described to me as played with a bladder by two men in a kind of race, corresponding with the "kicked-stick" game of the Pueblos. The women made sets of stick-dice for us, but the "hand" game seemed to be the principal native game surviving. Among the first lodges visited was one occupied by an old man named Yokonite, whom we found engaged in making arrows. The agency clerk told us that Yokonite was in the habit of laying in a large supply of fire-

wood during the summer. When winter came, his cabin was resorted to by the young men to play "hand." He would provide fire and shelter, and they in turn would give him small sums from their winnings, and in this way he secured a living. We purchased two sets of the "hand" game from him, and his old wife made two sets of the counting-sticks used with it. As we were leaving, this woman brought us the flat basket and beater used in gathering seeds, together with the sunflower seeds she was collecting. The obliging clerk at the agency told me many anecdotes of the Indians, and the difficulty experienced, even by those living upon the reservation, in learning anything definite concerning their beliefs and traditions. As an illustration, he said, that while under no circumstances will they kill a coyote, it was fully a year before he discovered that it was on account of the fact that they regarded the coyote as their ancestor. I should not fail to mention the courteous treatment we received from the agent and trader at Ross Forks. Aided by the latter, we packed our boxes and took the train back to Ogden en route for Salt Lake City.

It was the morning of Decoration Day, and the train was crowded with visitors to the celebration at Pocatello. Looking from the car window we saw the ceremonies in each town as we passed; wagons in great numbers, throngs of people, and not infrequently the little graveyard on the side of the valley, with the procession moving among the graves. The tedium of the journey was broken by a chance encounter with some members of a theatrical troupe on their way from Butte, Montana, to Salt Lake, where they were engaged to perform at the opening of a new resort on the lake called Saltair. One introduced himself as the author of the then popular song, "There Will Be a Hot Time in the Old Town To-night," and described with much enthusiasm the circumstances of its composition, and how the question of adopting it as our national air had been discussed even upon the floor of Congress.

On leaving Ogden we were impressed, as before in the Mormon country, with the marvelous way in which the land had been redeemed and cultivated by this remarkable people. Substantial and tasteful houses, good barns and excellent fences, with a general air of prosperity were everywhere apparent. We arrived in Salt Lake City in the afternoon.

Dorsey proposed to go on that night to Price, where we were to take the stage for Fort Duchesne, Utah. Overcome with fatigue, I urged at least one day's delay. Dorsey reluctantly assented, and we had an opportunity of inspecting the city and visiting the Deseret Museum. The museum occupies the upper floor of the building of the University of Utah. It contains a valuable collection of relics from the Cliff Dwellings of Southern Utah, in part the collection exhibited by the State of Utah at the Columbian Exposition at Chicago. Among the more important objects are a fragment of an atlatl, or throwing-stick, with its loops, some very beautiful woven sandals with colored designs, and the mummy of a man of great size, perfectly preserved, lying on his back, with a wooden pillow and foot-rest, similar to blocks in our collection, of which the use had not been known to us. In the same room was a case containing a miscellaneous collection of ethnologic objects, including a carved idol of the usual type from Hawaii.

The curio stores in Salt Lake City were large and interesting. The demand for Indian curios is so great that the dealers send to the various reservations for supplies, leading to the manufacture by the Indians of many objects which are created for this special purpose. Thus I saw at Salt Lake a number of implements from the Arapaho at St. Joseph, Wyoming, nearly all painted and ornamented with beadwork in order to make them more attractive to the uncritical purchaser. The shops generally contain quantities of spurious Mexican antiquities of pottery, stone and bone, among which there did not appear to be a single genuine specimen. The most curious of these fabrications are human bones, skulls and femurs, decorated with incised and painted figures representing the day signs of the Mexican calendar.

The next reservation on our program was that of the Ute at White Rocks in north-eastern Utah. We went by rail to Price, 121 miles, by the Rio Grande Western Railroad. The scenery in the mountain passes was wonderfully fine, and the ascent to the divide, an engine pushing behind, most interesting. We remained over night at Price and started the next morning in the usual dilapidated stage for Fort Duchesne. The first few miles of the journey were very pleasant. In the foreground were the Roan mountains, and the desert was covered with

cactus and sage-bush. The entire country appears on the map as "Bad Lands." The mesa was broken by deep gullies, or arroyos, the dry beds of mountain streams. As we advanced the alkaline dust became more penetrating. Skeletons of horses and cattle, lost in the winter storms, were scattered along the road-side. We crossed the Roan Mountains, and entered Soldier Cañon, where we had dinner at a cabin. Leaving Soldier, we entered "Nine Mile" or "Minnie Maud", an extension of that marvelous natural phenomenon, the Grand Cañon of the Colorado. Its walls are precipitous, and on the rocks are numerous Indian pictographs. Dorsey expressed the opinion that these pictures, among which I recognized the antelope, Rocky Mountain sheep and rattlesnake, were the work of children. The rocks throughout the country southward are full of them, and Hopi children to-day are in the habit of making them. With the Indian pictographs were names and other words, scrawled in black paint, the work, it is to be inferred, of teamsters and soldiers on their way to the fort. Several small cliff-houses, one with a wall, were visible from the road. We were informed that the country was full of these remains.

We reached our next stop, Smith's, at about nine o'clock, had supper and put up for the night. Smith was interested in a gilsonite quarry, one of the newly discovered natural resources of the State, and gave me samples for analysis. The stage started again at four in the morning, and we drove to the river, where we breakfasted at a miserable cabin. On all this long stretch from Price the water is so alkaline or impregnated with sulphur as to be undrinkable, and the teamsters all carry water barrels strapped to their wagons. Crossing the river, we continued over the dusty plains, passing wagons laden with bags of gilsonite, and arrived at Fort Duchesne at about twelve o'clock. A crowd of negro soldiers was lounging about the store when the stage drew up. Without delay we engaged passage in the mail wagon and were driven by a boy to White Rocks, the agency of the Uinta Utes, fourteen miles from the fort.

The Uinta Valley and Uncompahgre reservation occupies an area of 3,186 square miles, and has two agencies, the principal at White Rocks, and the other, a sub-agency, at

Ouray, some thirty-two miles distant. It is inhabited by some eight Ute tribes, all Shoshonian, and has a total Indian population of about 1,700. We have no good published accounts of the customs of these Indians, although extensive linguistic collections have been made among them by Major J. W. Powell and the officers of the various government surveys. The road to White Rocks lay across a prairie covered with cacti and wild flowers just bursting into bloom. Nothing could exceed the beauty of the cactus blossoms, pink, red and yellow, of many tints and marvelously delicate, carpeting the land for miles. Crossing several rapid streams, we saw at last the scattered Indian houses and finally reached the agency. We alighted at the store, a type of building with which I had now become familiar, a long frame structure filled with canned goods, bridles and miscellaneous wares, with blankets, beads and ornaments for Indian trade and a few beaded curios made by the Indians. It was ration day and a number of Indians, men and women, wearing blankets, were gathered about the store and agency buildings. There was a council going on about some money which the Indians expected and the agent was endeavoring to tranquilize them. After considerable negotiation, we procured an Indian, John, with a wagon to take us that evening to the Indian houses.

The Indians at White Rocks appear to be in about the same condition as those at Ross Forks, or a little better. They wear moccasins and blankets, but no personal adornments like the Shoshoni at Washakie. Their houses are comfortable log cabins. They have a few canvas tipis, but their summer shelters consist of young saplings with their foliage, laid on tipi poles to form a conical structure. Their reservation is traversed by numerous swift-rushing mountain streams, full of fish, which we forded repeatedly in going from house to house. Our first purchases were the small beaded pouches for matches or ration tickets, similar to those used by the Arapaho. Prices were relatively dearer than at Washakie, and we learned that they bought or traded many things from the Shoshoni and Bannock. It is amazing how much visiting is constantly going on, a custom surviving from early times. As an illustration, our interpreter, John, had visited the Bannock, Piute, Shoshoni, Sioux, Crow, Arapaho, Navajo and Hopi. From his

remarks about the beauty of the Hopi girls, whose method of wearing the hair he described, it would appear that the pursuit of the fair sex was one of the chief objects of these journeys. His admiration for the Hopi maidens was evidently tempered by a wholesome respect for the men, of whom he seemed to be afraid. Another interpreter, Charlie, an Uncompahgre Ute, whom we afterwards engaged on our way to Ouray, told us he had been ten times in Washington. He was familiar with New York, Philadelphia, and Chicago, and spoke Spanish fluently. He said that he also spoke Shoshoni, Bannock and Sioux.

The Uinta Ute were preparing for their Sun-dance, to be held in some two weeks, and had had a rehearsal on the Friday night before our arrival. They dance at a place about two miles from the agency, not using the same spot again. We were told they left a remarkable representation of the sun, with the painted skull of a buffalo and great quantities of clothes in their sun-dance pavilion, which is never again visited after the dance. They believe if one should enter it again, he would surely die. Their other principal dance is the "Bear dance," performed in the spring. In this they employ a notched stick as a musical instrument, together with a painted gourd rattle. I purchased one of the latter (which Dorsey identified as similar to one of the rattles used by the Hopi) from the leader of this dance. It was afterwards explained to me that there were but two of these rattles, one at each of the two principal settlements of White Rock and Ouray. In the Sun-dance they use a whistle, properly made from an eagle bone, identical with those we obtained from the Shoshoni and Arapaho.

I have spoken of the lack of personal ornaments. Lieutenant Walker, U. S. A., showed us a necklace of split deer hoofs which was used in the Sun-dance. We saw, however, none of the dance paraphernalia that was so common among the Shoshoni except an occasional small and poor bunch of feathers. At one house we found a large cage made of saplings containing a live eagle, which Charlie told us was kept for its feathers, as eagles are kept in Zúñi. Elsewhere we saw two young bears in a log cage, to which they were chained so that they could play about outside. An Indian boy also had a fox cub which lived on

affectionate terms with the dogs. Ancient arrow heads are employed by the Utes as ornaments, or rather, I infer, as a protection against ill luck, to be explained by Mr. Roberts' description of the demon of ill luck among the Shoshoni. I bought several spear points with thongs attached, and a child's necklace of old glass beads with two arrow heads fastened to it. More curious even was a flint knife, seven and a quarter inches in length, a single flake with marks of secondary chipping, tied with a thong. Bows and arrows are still in use among the Utes to shoot rabbits and small game, as is natural from the high prices for ammunition charged by the traders. Dorsey bought a sinew-backed bow and twenty-four arrows of good quality for five dollars. These Indians still make cups and bowls from maple knots, as well as small vessels of steatite. They use wicker bottles, lined with pitch, of their own manufacture, to hold water. These bottles are to be seen in every lodge, with baskets of a variety of shapes. Among other aboriginal implements they employ the pointed stick for digging roots, and large flat stones for grinding corn. The latter are now turned to account for crushing coffee. With the restrictions imposed upon their hunting off the reservation, they are unable to procure deer skin, and the old customs of dressing hides are disappearing. We saw a woman scraping a hide with a common butcher knife, but Dorsey picked up a stone near by which she said was used for the same purpose.

Card playing is the usual method of gambling, but the game of "hand," played with four bones, still flourishes. The women made us sets of sticks for a dice game unlike any we obtained elsewhere. The dice consisted of some twenty small pieces of willow, one side flat and painted, four red, four blue, four green, four yellow and four black with burned designs. They were put in a winnowing tray, which was given a sharp tap on the ground, the counts being made according to the way in which the sticks fell. The women play the juggling game with three clay balls which we found among the Shoshoni, and the hockey game with a buckskin ball and a curved stick. Among their toilet articles we noticed the paint bag for red paint, hand mirrors and tweezers. Dorsey picked up a single specimen of the old grass comb which has generally been replaced by the implement of civilization.



PLATE 21. The "Crazy" Indian, Uinta Ute, White Rock, Utah.

Upon our arrival at White Rocks we were at once told of the "Crazy Indian," one of the sights of the place, which we were urgently recommended to see. According to all accounts this Indian had been lying naked upon the ground, exposed to the weather for a period of twenty years. During this time he had spoken to no one, receiving the food provided for him daily in silence. We had little or no curiosity to see this unfortunate creature, but when John drove us past the place, we reluctantly went over, thinking it the easiest way to satisfy our many informants. The Indian was lying, entirely naked, in a shallow pit, with his head buried in his hands. He had no protection save a small screen of twigs. To our surprise he appeared well and vigorous; his body well nurtured and his skin healthy. He did not stir or notice us in any way. We were told that he had a brother or relative who looked after him, and there was a kind of pen built of stakes near by, that was evidently designed for him. We heard two explanations, both at the fort and at White Rocks, of the Indian's peculiarity. According to one account he had been crossed in love, but another and more probable story was that he was endeavoring to make atonement for some terrible crime in accordance with a vow. I am indebted to Captain Guilfoyle, U. S. A., the commandant at Fort Duchesne, for the excellent photograph of the "Crazy Indian."

After two days at White Rocks we returned in the mail wagon to the fort, where Captain Guilfoyle kindly provided us with a government ambulance to take us to the sub-agency of the Uncompahgre Utes at Ouray, eighteen miles from the post. Passing the government school, known as the Ouray School, near which were a number of houses of the Uncompahgre, some four miles from Duchesne, we reached Ouray early in the afternoon. The sub-agency proved to be a forlorn place, the buildings small cabins, mostly abandoned. The trader told us that there were no Indians about, and that with the exception of two families across the adjacent Green River, which was now so high as to be impassable with our team, all of the Uncompahgre were off in the mountains, several days' journey by pack mules. Disappointed in our errand, we returned to Duchesne, driving over a prairie carpeted with cactus blooms even more delicate and beautiful than those at White Rocks.

High up on one of the cliffs we saw a recent Indian painting of a man and a pony done in colored chalk.

We passed the evening with Captain Guilfoyle at the post. He had a large collection of Navajo blankets, many of which he had obtained at Duchesne. These Indians procure them by trade with the Navajo, a good blanket being esteemed equal to a pony. The Ute frequently have old and valuable blankets such as can no longer be obtained from the Navajo themselves, their present manufactures being debased by aniline dyes and wools purchased from the traders. Captain Guilfoyle had seen much service with the Indians, and was familiar with their character and habits. He had opposed the abandonment of the post, which had been recommended by others, as he considered it necessary for the preservation of peace among the Indians. They chafe under their present restrictions and the cutting off of their hunting grounds. During the Spanish war, one company was withdrawn, and the Indians immediately became turbulent. They proposed to leave the reservation and go to Colorado. The captain sent for the leaders and told them if they left he would follow them to bring them back as long as he had a man left. As a result they did not leave. While recognizing the necessity of firmness in dealing with the Indians, he was aware of the injustice that had been done them. He declared that in all his many experiences in fighting the Indians, he had never been in a conflict in which the Indians at the outset were not in the right, or did not have the right chiefly upon their side. He was bitterly opposed to what he regarded as the mistaken efforts of the humanitarians who were endeavoring to civilize and transform the Indian at once. If done at all, it must be very gradually. In this connection he mentioned that the increase in the number of permanent houses was accompanied by a corresponding increase in the death rate.

Another morning passed in collecting among the Indian houses near the Ouray School, and we were ready to start on our return journey. Somewhat to our chagrin, we found that our places in the stage, which we had engaged and paid for, were already occupied. Captain Guilfoyle again came to our rescue and sent us forward in one of the government vehicles.

We arrived at Smith's long before the stage, which we had



PLATE 22. Summer Shelter, Ute Indians, Ouray, Utah.

passed on the way, and later encountered there the passengers who had displaced us. They proved to be a sheriff's posse from Salt Lake City returning from the unsuccessful pursuit of a band of outlaws who had fled north from Arizona to Ouray. There was a touch of humor in the situation. The sheriff, a giant with red whiskers, armed with a rifle and without a coat, was accompanied by a stripling reporter of a Salt Lake paper. They had lost their horses and saddles, stolen by the very band of which they had been in pursuit, and were overcome with chagrin and exhaustion. Later, on the train for Price, the deputy proved an interesting companion, introduced himself as Mr. Howells, a nephew of the novelist, quoted poetry, and finally told us he was a Mormon and offered us the freedom of Salt Lake City if we would accept his hospitality. We were unprepared for delay, went through Salt Lake City at midnight, and passed the following day on the train to Wadsworth, Nevada, where we arrived, to visit the Piute at Pyramid Lake, some time past midnight.

The Piute, embracing a population of about 2,300, scattered over southeastern California and western Nevada, are comprised among the so-called Digger Indians, a name regarded, but unjustly, as a term of reproach.

Passengers on the transcontinental trains see a few outcast Indian beggars from the car windows, and the unfavorable impression created by the name is confirmed. In point of fact the Piute on Pyramid Lake reserve are an industrious people, receiving but 5 per cent of their entire subsistence from the government, as opposed to 50 per cent by the Shoshoni and Arapaho at Washakie, 35 per cent among the Bannock at Ross Forks, and 65 per cent among the Uinta at White Rocks. The same is true of the Piute at Fort Bidwell in California, who receive no rations from the government. The Pyramid Lake agency has a population of 552, living on an area of 302,000 acres or $503\frac{1}{4}$ square miles. The agency buildings are at Pyramid Lake, eighteen miles from Wadsworth. We hired a team and started off from the town early in the morning, driven by an Indian policeman, Jimmy, who was to act as interpreter. There is a Piute settlement on the outskirts of the town, which we passed without stopping. The road lay across a plain covered with sage-bush, with mountains on the left

and the Humboldt River on our right. The river bottom became delightfully green as we progressed, in marked contrast to the arid plain, with little basins of extinct geysers scattered like warts upon its surface. At last the lake came in sight, the natural rock pyramid which gives it its name rising in a truncated cone in the centre. We descended to the river valley, driving beside the river on a well-built road, lined with enormous cotton wood. The vegetation was surprisingly luxuriant and the valley impressed us as a kind of earthly paradise. On our way we stopped at one of the Indian houses. The family were reclining in a wickiup built of saplings, a square structure, with its roof and sides screened with boughs. An old woman was approaching the lodge carrying a huge conical basket, partly filled with seeds upon her back. I bought the basket with its contents and accessories, a winnower, and basket flail for shaking off the seed. A quantity of dried fish roe filled another loosely woven carrying basket. The men wore moccasins and the women blankets, but otherwise the native dress has disappeared, and the agent reports the tribe as entirely wearing citizen's clothes. The women carried their infants in baskets made of willow splints with a curved headpiece, of which we purchased several specimens, the mothers taking their babies from them. Water tight bottles of peculiar conical shape and hemispheric food bowls were the chief other objects of domestic manufacture. In most houses the old stone mortar, slightly concave, with a cylinder-shaped stone pounder survives. We saw it used in grinding corn, but in general it is used for crushing coffee. At one house we saw a large mortar with a deep conical cavity, sunk to the level of the surface of the ground.

We drove on to the Indian school and finally camped by the river for luncheon beneath the shade of a giant cottonwood. Jimmy informed us that the Indians had gone up to the lake to fish. The lake, which lies wholly within the limits of the reservation, is filled with a splendid species of marketable trout. The men seemed more alert, industrious and intelligent than any Indians we had met. They speak English uncommonly well. The women are inferior and like those of other tribes, are destitute of physical beauty. Their cheeks and hands are tattooed with a variety of marks. We purchased from them near the school a number of sets of split reeds, painted red on



PLATE 23. Ute Women Playing Dice Game in Basket, Ouray, Utah.

one side, which they use as dice. The reeds, eight in number, are held together perpendicularly between the palms, with ends resting on the ground, and allowed to fall over. The game is kept with counting sticks, which are moved around a circle of little sticks stuck in the ground.

We drove back to Wadsworth at nightfall. Jimmy told us that the Indian men of the town assembled in the afternoon in a kind of shack near the river, where they engaged in gambling. We found them playing "hand" with cylindrical sticks in default of bones, and later we saw them play a hiding game with two large and two small sticks. I heard, too, of a kind of football, with a soft leather ball, each side having a ball and the one first making a given circuit winning.

At Wadsworth we saw the last of the Shoshonian tribes. Our route lay westward to San Francisco, to which we proceeded without delay.

CHAPTER III.

CALIFORNIA: SAN FRANCISCO, HUPA VALLEY.

I had looked forward to visiting the Chinese quarter in San Francisco with a lively curiosity. To my great disappointment I found it under quarantine in consequence of the reported outbreak of the bubonic plague, the entire quarter surrounded by ropes and policemen guarding the street crossings. The usual noises of a Chinese settlement were hushed, the flags and gay decorations lacking, and only a few men walking listlessly in the streets. The city generally had many attractions, however, and the variety of its out-of-door life afforded me constant entertainment. I made it a point to visit the various public museums and collections. Most of all I had desired access to the Bancroft Library. Unhappily it was closed, nor could I find anyone able to procure admission for me. The ethnological and archæological collections of the California Academy of Sciences, although small, are of remarkable quality. Among them is a portion of the South Sea collection, formerly the property of the late Mr. C. D. Voy,* of Oakland, in which, with other valuable Marquesan material, is a superb carved wooden bowl of enormous size. Notable, too, is the fine collection of antiquities from Guatemala, which formed part of the exhibit of that country at Chicago in 1893. The Academy is devoted chiefly to natural history, and at the time of our visit its archæological collections were without a special curator. We also saw the collection of ethnographical objects from Alaska, presented to the University of California by the Alaska Commercial Company, and temporarily installed in a room in the Oakland ferry-house. They consist chiefly of Eskimo material from the vicinity of Point Barrow, with a number of Haida and Tlingit objects.

The public museum of the city, the Golden Gate Park Memorial Museum, is an outcome of the Midwinter Fair which was held in San Francisco in the years 1894-5. The museum occupies a temporary building, surviving from the fair, and

* The other part of this collection is in the Free Museum of Science and Art of the University of Pennsylvania.

simulating in its architecture an Egyptian temple. It is divided into twenty-nine departments, the interior being cut up into rooms by means of wooden partitions. The arrangement in general is technological, ceramics, bronzes, etc., being placed in separate rooms. The effect is pleasing and artistic, and everything within the means and knowledge of the promoters seems to have been done to make the museum interesting and useful. It lacks, however, all distinctive character and local color, the only exception being a room devoted to the contents of an old San Francisco "curiosity shop," the collection of a local antiquary. Two rooms are given up to ethnology, one general, comprising material from the Marquesas and Hawaii, and an inner apartment, closed at the time for rearrangement, with an American Indian collection. The latter includes stone implements from California and objects from the Pomo and the Indians of Hupa Valley, in greater part the private property of the curator of the museum, Mr. Whitcomb. In a loft above he had stored a fine collection of California basketry. These Indian collections, naturally of the greatest interest to a stranger visiting the city, appeared to be the least considered and valued among all the possessions of the museum. In leaving we inspected a colonial room, fitted up with a collection of old-time New England furniture and utensils which Mr. Whitcomb had brought from Massachusetts. I have never seen a more successful arrangement of material in this country.

There is another small collection of ethnological material in a kind of museum in the pavilion of the Sutro Baths, at the Cliff House. We devoted one day to visiting the Leland Stanford University, at Palo Alto. The college was not in session and the buildings were deserted. The museum, housed in a great new building, was the special object of our visit. Its most interesting feature, to me at least, was the room containing the collections and personal belongings of the youth in whose memory the university was founded. It is a collection the value of which will not be diminished by years, and should be jealously guarded as a memorial for future generations.

On returning from my trip to Hupa Valley I again visited Chinatown. The quarantine had been abandoned, the ropes were down, and the place had regained some of its normal life and gaiety. I had heard so many stories of its curio shops,

restaurants, theatres and out of the way corners that my expectations were raised to a very high pitch. But I found nothing new in the stores, and even at the theatre the play was the story of Muk-kwai Ying, from the *Tín mún chàn*, an old friend, although I had never seen it on the stage. I ransacked the shops in search of strange things with but little success. The most interesting of my purchases were a number of complete suits of paper clothes, *t chi*, hats, coats, trousers, stockings and shoes, such as are burned for the dead at Chinese funerals. In some of the stores were Buddhist rosaries of 108 red or yellow clay beads, and everywhere in the windows little tortoise shells (a species of Emys), used to shake the coins in, in divining with "cash." The inhabitants were indignant over the quarantine and disposed to be sullen, but a few spoken words of Chinese excited their curiosity and transformed them into the same interesting and obliging creatures I had known in their colonies on the Atlantic seaboard. Among my other quests in San Francisco were books and kindred material relating to the early history of the city and coast. The old book shops contained practically nothing, and the curio stores, excepting of course that marvelous warehouse of Mr. Nathan Joseph, were equally unsatisfactory. The only things notably rare and valuable were the carved and colored ivory images of saints, recent loot, no doubt, from churches in the Philippines.

On our arrival in San Francisco we found that it would be impossible for Dr. Dorsey and myself to proceed together over the entire route that he had planned. We accordingly separated, he going north to Klamath Lake, and I proceeding alone to Hupa Valley. In thus relinquishing to me a trip, which, above all others, he had looked forward to on the expedition, my associate acted with characteristic generosity. He agreed to purchase a collection for me among the Klamath, while I, in turn, was to collect for him in the valley.

Of all the Indian reservations on the continent, there are none more romantic and beautiful. Located in Humboldt County, forty miles across the mountains from the town of Arcata, the reservation extends along both sides of the Trinity River for a distance of sixteen miles. It is twelve miles wide and has a total area of about 99,051 acres or 150 square miles. Established in 1864, the reservation continued for many years one of

the most difficult of access, being reached only by two days' mule travel on a mountain trail, which, at one place, at least, was not without danger. About the year 1889 Lieutenant-Colonel William E. Dougherty, U. S. A., the agent in charge, built a military road over the mountain which was completed in 1891 by Mr. I. A. Beers, so that at present the journey is made without discomfort.

Northern California was the residence of a number of Indian tribes, many of them speaking entirely distinct languages. Among them we find a group belonging to the great Athapascan stock, a stock which embraces all the inhabitants of the tract that extends from Hudson's Bay to the Eskimo on the north and northeast, and to the coast tribes on the Pacific. The Hupa Indians are members of this family. They appear to have been comparatively late settlers in the valley, from which they drove out the original inhabitants. When the reservation was established there were placed upon it a number of bands scattered about the Trinity River. The present population, numbering 567, are chiefly Athapascan. Some eight miles beyond the valley, at the junction of the Trinity and Klamath rivers, is a village called Weitchpec, inhabited by a tribe speaking a different tongue and assigned to the Weitspekan family. Although the Hupa and Weitchpec Indians are not linguistically related, their customs appear to be practically identical. Professor Mason remarks of the Athapascan tribes of this region that their arts have been so long in the leading strings of this salmon-prolific, acorn and redwood abounding region that in houses, dress, implements and products of industry they do not differ from their immediate neighbors. Our chief authority on the tribes of California is Stephen Powers, whose monograph was published by Major Powell in his "Contributions to North American Ethnology." Our knowledge of the Hupa has been supplemented by a paper by Professor Otis T. Mason, "The Ray Collection from Hupa Reservation," in the Report of the Smithsonian Institution for 1886.

The National Museum possessed a rich collection of ethnological material gathered by explorers from the time of Wilkes downward. In order to bring this material in shape to illustrate the entire life of the Klamath River tribes, Lieutenant P. H. Ray undertook, while at Fort Gaston in 1885, to collect

material for this supplementary work. A descriptive account of his collection was published by Professor Mason in the following year.

Powers describes the Hupa as having been the finest race in all the region next after the Karok on the lower Klamath, whom they excel in statecraft. They kept most of the tribes under them in a state of semi-vassalage, exacting from them an annual tribute of peltry and shell money and compelling their tributaries, even down to his day (1872), to speak Hupa in communication with them.

It was with many pleasant anticipations I left San Francisco one afternoon at two o'clock on the Pacific Coast Steam Navigation Company's steamer "Pomona," on a voyage of 300 miles on the Pacific. The steamer was slow and crowded with passengers. The journey was without incident, and at ten o'clock the next morning, we having at no time gone out of sight of land, terminated at the great jetties recently built by the government off the town of Eureka. There was a brisk altercation between the captain and the United States health officer, and a delay of two hours incident to the quarantine, established in consequence of the plague in San Francisco. Eureka is a bustling town with an air of wealth and prosperity. A steam ferry connects it with a railroad for Arcata. Without waiting for the boat, I drove directly to this place, where I expected to find a conveyance to the valley. Arcata is a centre of the redwood lumber industry. Train loads of huge blocks filled the sidings and a great sawmill was engaged in cutting up the huge logs. I was directed to Mr. Brizard, a merchant, who has branch stores in many towns in this region, including, among others, a store at Hupa, where he purchases most of the basketry made by the Indians. Mr. Brizard greatly facilitated my work. He was in daily communication with the valley, and at once procured a team and driver to take me over. His son had recently made a collecting trip to Hupa and secured everything the Indians were willing to dispose of. This collection he sold me on most reasonable terms. I also found an intelligent photographer in Arcata, who had lived on intimate terms with the Indians and had a fine series of views of the old dances. Some of his pictures I have reproduced herewith.

The livery stable man lived at Blue Lake, and I drove over



PLATE 24. View of Hupa Valley, California.

with him in the afternoon. The road lay across rich bottom lands, full of luxuriant grass and other crops, lands which I was told commanded \$200 per acre. Blue Lake is a lumber town. We reached the hotel at nightfall, and after supper I visited an Indian rancheria on the Mad River, about a mile from the village. Here I found some five or six families living in as many houses. They had practically abandoned their old customs. The women were pretty and intelligent, but disfigured by a blue bat-shaped mark tattooed on their chins. The men sold me several tubular wooden pipes, a dance quiver of cat-skin filled with arrows and a sinew-backed bow. An old man called Dick told me his father had been a doctor. I procured from him a great bunch of feathers and a very long wooden pipe which he had inherited, as well as a large bundle, three packs, of "Indian cards." These Indians spoke a language entirely different from those of the Hupa Valley. From the numerals which I collected, I found it belonged to the Weitspekan stock.

We were off early the next morning on our way across the mountains. A fog had blown in from the sea and the luxuriant vegetation was dripping with moisture. As we ascended the mountain side we passed extensive clearings where the redwoods had been felled. The huge stumps, sawed smooth across, told the stories of these gigantic trees and their lives through the centuries. Here and there a dead tree, blackened by fire to its very top, remained to indicate what once had been. When a tree is felled the bark is removed by burning, and the land is afterwards cleared with fire. The stumps, in spite of repeated burnings, remain.

Our road was worn in deep ruts by the timber wagons, one of which would occasionally pass us, piled high with redwood blocks from the logging camp above. In the underbrush and along the roadside there was a profusion of brilliant wild flowers. Raspberries and thimble berries were also ripe and inviting. Long gray moss hung from the scattered trees and wreathed itself across our way.

Continuing our ascent, we reached the surviving grove of redwoods. Their beauty is indescribable. Ascending still higher, we entered a belt of pines and at last encountered oaks on more open ground. With each successive turn the view changed,

the valley below presenting a new aspect. Nowhere have I observed such a variety of tints in the woodland foliage. The road continued up and down over the hills until at eleven-thirty we reached Berry's ranch, seventeen miles from Blue Lake, where we put up for dinner. Hearing that there was an Indian rancheria near the hotel, I was guided across the hill and found several cabins of the Redwood Indians, who speak a language practically identical with the Hupa. In one of the cabins was a crippled old man from whom I bought two wooden pipes. The principal thing of aboriginal manufacture in his dwelling was basketry. His squaw sold me almost the entire outfit, including a large globular storage basket, and several of the water-tight baskets used in boiling food with hot stones.

From Berry's ranch the road ascends for six miles, running in zigzags up the mountain, so that one looked again and again upon the same scene, each time from a greater elevation. At the summit we encountered a band of Redwood Indians returning from a deer hunt. It was a family party, a hearty young man with heavy black hair hanging straight down across his forehead, armed with a rifle, his squaw and two children, and an old man and his wife. Their pony was laden with meat and hides.

The road again entered the woods and twisted and turned about the mountain sides with many steep grades and sharp corners, passing over numerous springs that trickled down from the rocks. We reached Willow Creek at nightfall, had a comfortable supper and bed, to start at six the next morning for Hupa. The hotels in this region are "two bits," that is, twenty-five cents for bed and for each meal. Those I stopped at were cheap and good, with substantial, well cooked, plain food. All the talk at Willow Creek was of placer mining, and shortly beyond the hotel we crossed the iron pipe carrying the water, and saw the stream at work, carving down the bank in a field adjacent to the road. At about ten o'clock, after ascending a high wooded hill, we caught sight of the Trinity River, and soon after obtained our first glimpse of the Hupa Valley. Another turn and it stretched before us, the Trinity, a lively, red-colored stream, running through it. The bottom lands appeared in a high stage of cultivation. Unpainted wooden cabins were scattered amid fields of ripening grain.



PLATE 25. Basket-maker, Hupa Valley, California.

Immediately below us, at one end of the valley, was a saw-mill, and beyond, in the middle distance, the white buildings of the agency. We drove down the road at the side of the hill, and emerged at last on a level with the river.

The square enclosure of the Indian school, once occupied as a military post, Fort Gascon, embraces a large area. The grounds were delightfully green and the buildings well cared for. Little Indian boys were playing on the grass. Mr. P. E. Goddard, a missionary of the California Indian Association, received me most cordially and lent me his horse to make a preliminary tour of the reservation. After dinner, I secured a half-breed interpreter. We crossed the Trinity on a flat-boat, poled across by an old Indian ferryman, and I visited the houses on the right bank ascending the valley.

The Indians generally have two houses, one a modern cabin, built on their allotment where the younger generation live, and the squaws are to be found, weaving basket hats for sale, and the other the old house which they inhabited at the time of the white discovery. The latter consists of a circular pit some four or five feet deep, covered with a roof made of slabs, raised a short distance above the surface. A fire is built in the centre on the earth floor, the inmates sleeping on skins and blankets on the ground. A space around the edge of the pit, covered by the roof, serves as a kind of loft for storage purposes. The door is a circular hole, cut in a board, nearly on a level with the ground and just large enough to admit the body, it being necessary to crawl in, head first, on one's hands and knees. A space before these cabins is paved with stones, large boulders which have been worn to glassy smoothness through the use of ages.

It was somewhat fatiguing to crawl into one after another of these old houses. They are the homes of the old people. Usually I found only a half-blind, decrepit woman seated beside the smouldering fire. Above on the edge of the pit were large storage baskets containing acorns, and an accumulation of old baskets for every sort of household purpose. Thus the cradle is of basketry, a roomy, scoop-shaped basket, with a conical basket cover to protect the infant's face. The pots are water-tight baskets, heated by hot stones placed within them. Plates for serving food are made of wicker work. The stone mortar

has a basketry rim. Even the hat the women wear is a hemispheric basket bowl.

It was interesting to rummage among these accumulations of discarded things, which the women, after a few preliminary objurgations, were willing to sell for trifling sums. Not so the new basket hats for which they asked uniform and definite prices. Only the experienced collector knows the relative value of the new and old wares. The other objects offered were always the same: carved wooden ladles for stirring the acorn meal mush, muscle shell spoons, sharpened bones for skinning eels, or old stone pestles, the use of which is gradually disappearing. The poles under the rafters were laden with eels hung up to dry in the smoke and with strips of smoked salmon, the universal food. Occasionally I saw great basket-bowls of acorn flour mush. The women collect the acorns, using a carrying basket of wicker, which is suspended by a band across the forehead. They remove the hulls by striking them with a stone, and pound the nuts, after drying them, in a stone mortar. In this latter process the mortar is placed in a large, flat basket, with the basketry rim above it. Finally the mush pots with the heated stones come into requisition, together with the carved stirring stick.

I picked up a considerable collection of baskets and other household objects, but the more precious things, which I was especially in search of, eluded me. "Wait until we reach Captain John's," insisted the interpreter. Captain John, Mr. Goddard had told me, was one of the most important men in the tribe. He had a great store of Hupa treasure, and once exercised despotic control over the Indians in the valley. I gathered that of late his influence had declined and that his reputation, among whites and Indians alike, was that of a crafty and unscrupulous man. Captain John had a new house, bare and uninteresting. The owner was absent, and the interpreter's promise seemed likely to be unfulfilled. Upon repeated inquiry, I learned that Captain John was taking his ease in his private sweat-house, and here, at last, I found him. The sweat-house was a low structure with a flat board roof and a small, tightly-closed door on one side. I opened the door and peered down through the circular aperture. The hot air was at first overpowering. The large round pit was entirely bare, and

unoccupied save for a very old man with long yellow-white hair, who was reclining, entirely naked, upon the ground, his head resting upon a wooden pillow. He seemed so feeble I hesitated to disturb him, and when at last I succeeded in arousing him, he declared in a weak voice that he had nothing and would sell nothing. At the sound of rattling silver he showed a little more vitality and stood erect, and, at last, after the customary gift of tobacco, I purchased from him the two wooden pillows, the only portable objects in the chamber. Considerably disappointed, I packed my pillows in the wagon, when Captain John appeared, fully dressed, and scarcely recognizable. He proposed, for a consideration, to show me his possessions. Mr. Goddard had informed me that tribal rank depends upon the ownership of certain much-prized objects used in the native dances. These objects may not be sold, and at best, may only be pledged for money. They all have a well-understood pledging value. All members of the tribe are or were interested in their preservation.

The materials of these aboriginal treasures consist of the skins of the white, albino deer, the fur of the silver fox, the red feather crests of the woodpecker, valued to-day at about one dollar apiece, and obsidian or jasper, which was manufactured into long blades of great delicacy and beauty.

The objects themselves consist of entire white deer skins, which are preserved with infinite care. The head and neck are stuffed and those I saw had a pendulous strip of red feather work, made of woodpecker's crests, hanging in place of the tongue from the mouth. Swan relates that he offered \$100 in gold coin for a single specimen. These deer skins were paraded at the white deer dance in the autumn, their possession rendering their owner illustrious in the eyes of all men. Strips of white deer skin are also manufactured into head-dresses, a band of deer skin some eight or ten inches wide being overlaid with one or more rows of woodpecker's crests. Another prized head-dress consists of a ring-shaped roll an inch and a half in diameter, covered with white deer skin overlaid with red or yellow crest feathers. Some of these which were shown me had white cotton cloth substituted for the deer skin. Two plumes, each made of several splints covered with white deer skin and tipped with feathers, with a wooden shaftment, are stuck into this ring

on either side of the forehead. I regard these rings and feathers as survivals of the gambling wheel with its two darts, which are used as head-dresses by other tribes. Another head-dress consists of a band of deer skin with horizontal lines of red paint, edged on both sides with the fur of the silver fox, and still another of a similar band, mounted with carved sea-lion's teeth, set like spikes around it.

Even more valued than the deer skins and woodpecker crests are the large blades of obsidian, which are either mounted with glue on wooden handles, or shaped like a double-bladed dagger, and wrapped in the centre with deer skin to prevent injury to the hand. Some years since a dealer in San Francisco visited the reservation and bought one of the largest and most celebrated of these implements. The loss occasioned so much excitement among the tribe that he was compelled to return it. Among other objects which may not be sold is a cylindrical basket, some fifteen inches in length, its ends covered with deer skin, used in "jump" dance. Mr. Goddard informed me that it had a pledging value of four dollars.

The "basket" or "brush" dance is a medicine dance. Among its other appliances are quivers of otter, wild cat or fisher skin, turned fur inside, and filled with arrows, the ceremonial use of which is shown by many of them being destitute of points.

The money of the Hupa, in common with the tribes of this region, consisted of dentalium shells of a certain length. These were kept in boxes made from an antler, polished and carved. A few of the old people showed me specimens of this shell money, the butts of which were wound with narrow strips of snake skin. Of the boxes I procured several specimens.

Swan has briefly described the Hupa-dances, and Mr. Ericson, the photographer of Arcata, made a series of pictures of the white deer dance at the time when it was still celebrated.

In the first you will see our friend Captain John in all the vigor of his earlier years.

Mr. Goddard has kindly furnished me with a hitherto unpublished account of the dance, as well as the Hupa tradition of the origin of this interesting ceremony. He also described to me a "fire dance" performed for a sick person, or to ward off illness from a child. This dance occurs at night. The patient



PLATE 26. The White Deer-skin Dance, Hupa Valley, California.

is first bathed and wrapped in blankets. The ceremony is performed by a woman, assisted by a little girl. A number of brands or torches, tipped with pitch, are prepared, and one of these is lighted by the woman and passed over the patient, the girl handing a fresh torch when the first has burned out. Another very interesting dance is performed over a girl at the period of puberty. The girl, wrapped in a blanket, is placed on a kind of shelf and the dance is distinguished by a rattle, made of a willow sapling, some three to six feet long, split into a number of sections for a distance of two-thirds of its length, the segments being painted with transverse bands of red and black. These rattles are now manufactured for sale, but I was fortunate in procuring a number of old ones from a loft in one of the ancient "warm houses."

Mr. Goddard told me that in his opinion the last dance had been celebrated at Hupa. He explained that it was necessary for the Indians to provide food at the time of the dance for visitors from far and near, which they were now disinclined to do. This fact made them more willing than at any time before to dispose of their dance paraphernalia. Returning to Captain John, after a cash payment, he took me to his house, and produced from a jealously guarded and locked box a number of the dance treasures. After much negotiation he sold me one of the obsidian dance spears and three silver fox head bands, but the objects of white deer skin he declined to dispose of for any consideration. He kept them with infinite care, the flat head-dresses being rolled around a wooden cylinder and the rings wound over and over with a strip of cotton cloth. I succeeded, however, in buying from him two dance deer skins, but they were of the ordinary and not the scarce white variety.

An interesting feature of the houses was their private graveyards, little plots, only a few feet square, surrounded by a picket railing, that adjoined almost every dwelling. The clothes of the dead were suspended on cross-bars between the posts, with precious white deer skins sadly worn and frayed by storm and rain. On some of the graves were four or five conical carrying baskets, arranged to form a square, and placed bottom upwards with stakes driven through them.

The Hupa and Wichapec Indians wear the costume of civilization with the exception of buckskin moccasin and the

woman's basketry cap, plaited in different colors. I saw, however, some of the aprons formerly worn in dances by women, made of buckskin folded in the middle, ornamented with disks of shell, or composed of woven strands of yellow grass, strung with glass beads and piñon seeds in regular patterns.

The native industries of the Hupa, with the exception of basket making, fostered by Mr. Brizard have almost entirely disappeared. Bows and arrows are still manufactured, the practical arrows having bone points. Arrows with metal points occur among those offered for sale. Mr. Goddard informed me that there were men still living who practiced the art of chipping stone, but the arrows with stone points which were offered me were said to have been tipped with old points. I met a venerable fletcher, a protege of the missionary, who supported himself by making arrows and quivers for the curio market. Tobacco pipes are also still made. Those in common use were tubes of wood, expanding at the mouth like a trumpet, and tipped with a ring of steatite. The ordinary ones were some five inches in length and carried in a tubular pouch, which also serves to hold tobacco. The longer ones, eight to twelve inches in length, were described as doctor's pipes or as used in the sweat-house. The steatite is brought from over the mountains some distance from the valley. The men seemed to make their own pipes, as many carried partly finished ones in their pocket.

The Indians have practically abandoned their old games, using white men's cards, and playing a game known as "seven and a half." The one-time popularity of the old guessing game with a bundle of finely wrought splints was evinced by the many bundles of these objects which I succeeded in securing. I was told that the game was revived at the annual Fourth of July festival. The sticks are called *kiñ*, a generic name for sticks, the same name being given to the game. The number used varies. One is marked in the middle with a black band. Two players sit opposite. One takes the sticks, and, with his hands behind his back, divides them into two bundles, bringing them forward with the ends exposed, a bundle in each hand. The other then guesses which contains the black stick. The guesser indicates his choice, as in the game of "hand," by extending his hand and arm with a sudden motion, but



PLATE 27. White Deer-skin Dance, Hupa Valley, California.

always in a reverse way. Thus the player points to the other's left hand when he guesses the black stick is in the right and vice versa. This game was formerly played in time to the music of a square tambourine drum, the players being seated in two lines, each with his squaw behind him, who would sing. Each side had a drummer who controlled the play. The name of "cards" is correctly applied to this game for it belongs to the same family as our playing cards. It corresponds with the stick games of the Northwest Coast tribes. I found it among the Algonquian Crees, and it is identical with the "straws" described by the early writers. *Kiñ* was the man's game. By diligent inquiry I learned that the women once had a game of dice played with four small disks of muscle or abalone shell, and by a liberal expenditure of money, had several sets of these old dice reproduced for me. They let them drop from between their palms on a blanket and count the points, with twigs as counters. The cup and ball game is represented by four salmon bones strung on a cord, and caught, when swung in the air on a pointed stick. 'The familiar game of ball, widely played by Indian women elsewhere with a dumb-bell-shaped ball of deer skin, reappears among the Hupa as a man's game. Instead of the leather ball they use two little wooden billets, tied together at one end with a cord. This object is thrown and caught on a short, slightly curved stick, similar to those used by many Eastern tribes. Matches were formerly common between the Indians of different neighborhoods, the Indians of Hupa playing against those of Wichapec.

On the second day of my visit I dismissed my half-breed interpreter, gave my driver and his horses a holiday, and, engaging a healthy, hearty Indian farmer as my guide, started off in the early morning to ride to Wichapec. The air was delightful. The trees and verdure, stimulated by recent rains, were charmingly green. As we ascended the hill leading from the valley, the broad plain spread again at our feet, with the Trinity stretching red and turbid below. There is a wagon road part of the way, but I chose the trail, Alfred on a well-built sorrel leading, and I following on an Indian pony, as gentle a beast as ever trod the earth. The trail lay through virgin forest, along the crest of the mountain, huge trees and underbrush masking the descent to river, whose noise would

sometimes reach us. The way lay across rushing mountain streams. Here and there it would drop precipitously, the mare cautiously testing her way, resting betimes, and taking the steep ascents at a gallop when effort was needful. At one point the barking of a dog revealed to us the presence of a train of pack mules tethered on the mountain. The broken underbrush led my guide to surmise, and correctly, that one of the mules had fallen over the precipice.

We arrived at Wichapec at about eleven. My guide hitched our horses, and found a long dug-out canoe on the river bank in which we crossed, first the Trinity and then the Klamath, the two uniting a short distance below. He stood in the bow, pole in hand, and the swift current carried us across. The trip from Hupa to Wichapec is frequently made in a canoe, the journey being highly exciting. The Indians at Wichapec make their own canoes, which are short-lived, being broken by contact with the rocks in the river.

The Wichapec Indians are dominated by their salmon fishery, and I purchased a variety of objects connected with this industry. Their customs appeared identical with those of Hupa, and the specimens I collected among them differ in no way from those of the valley except in name. The language is absolutely dissimilar. At Mr. Brizard's branch store I was shown a large cup-shaped stone mortar which his agent asserted had been discovered in a placer mine. A miner in the store said that he frequently encountered such stones. It was their opinion that these objects were the work of some long-vanished race, anterior to the present Indians. We were well laden when we returned. Alfred carried two square drums in his hands, a difficult burden for a less skillful horseman. We arrived at Hupa at nightfall and the next day I left the agency to return over the mountains to Blue Hill and Arcata. There was something strangely familiar in the country and my taciturn driver, clad in solemn black, seemed like one I had met before and dimly remembered. He talked at last and told me of the life of the lumber camps and the mines, of how the Chinese left Eureka, with many other reminiscences of past, and for him, evidently, more prosperous days. He knew all the mysteries of short cards and grew almost eloquent when recounting fortunes won and lost upon the green cloth; and



PLATE 28. White Deer-skin Dance, Hupa Valley, California.

then I realized that I had met him, but in the pages of Bret Harte's fiction—for this land of mines and mountains is but outlying territory of the country that belongs, by right of literary discovery, to the author of the Outcasts of Poker Flat.*

HÖN-SĪTCH-Ā-TĪL-YĀ.

(A *Hûpa Dance*.)

BY PLINY EARLE GODDARD, A. M.

The White-deer-skin dance is held in the late summer or early autumn. The time does not seem to be definitely fixed by the moon, sun, condition of vegetation, or migration of bird, beast or fish. It used to be celebrated every second year.

Before the dance is held, settlement† must be made with the relatives of those who have died since the last dance. If both clans are to participate, settlement must be made in both. If for any reason either clan should celebrate the dance alone, no member of the other could be a spectator without full settlement being made in his clan. The amount paid varies according to the importance of the deceased. Five or ten dollars are considered sufficient for a child, or unimportant adult. Much larger sums are paid on account of the death of a chief or prominent man.

When the hearts of the sorrowing have been made glad by gifts, provision must be made for feeding the people. Not only all members of the tribe, but many visitors from neighboring peoples become the guests of those who are giving the dance.

The "properties" required in the celebration of the dance are often in the possession of a few individuals of the tribe.

* On returning to Eureka I met an old half-blind Indian in the street to whom I showed the dice and other games which I had collected on the trip. He gave entirely different names for all of them, which I have incorporated in the catalogue. He said that his name was Joe Wail, and that he was known as "Harry White." He spoke the Crescent City language and the name of his tribe was *Taät-oc-thin*. From a comparison of the numerals which I got from him it belongs to the Athapascan stock.

† Settlement here refers to a sum of money paid by the tribe to the relatives of one who has died a natural death, or a violent death that cannot be laid at the door of any individual.

Whether or not a dance shall be held, the time of holding it, and the particulars of its celebration depend upon the rich, who alone have the means to settle for the dead, the provisions for the feasting of the living, and the paraphernalia of the dance.

There is a priest for each clan. Usually both clans join in the dance under the joint control of the priests.* These priests seem to hold office by virtue of their knowledge of the ceremonies and their wealth in Indian treasure, including the things required in this dance. Both the knowledge and the property are ordinarily passed from father to son making the priest's office hereditary.

When all things are in readiness for the dance, the "properties" are placed in canoes and taken to Hō ũng-kūt (Kentuck Rancheria), where the first dance is held. The men "dress" for this dance by removing all their clothing, or in late years all but their underdrawers, and painting horizontal bars on their faces and breasts with *mil-kon-k-ă-děth-ěn* (soot from the sudatory). They wear a deer-skin girded to the waist and falling over the hips leaving the upper part of the body naked. They tie around their heads *yi-kă-hăn-nă-tô-wil* (a fillet of fur) and place *yi-năl-kait* (eagle feathers) in the knot behind. *Nă-kî-tîl-yě* (strings of beads), are placed around the neck. The deer-skins from which the dance takes its name are carefully tanned, the head and neck stuffed and the mouth ornamented with feathers. Thus prepared they are placed on poles which the dancers carry in their hands. Happy is the man who bears, on his pole, a *dî-lî-hũtch-tlũk-kai* (white-deer-skin).

After a short rehearsal, the men take their places in the line with the singer in the middle as leader. The officiating priest seats himself a little in front, facing the line, and kindles a small fire. He rubs *mă-hă-tchă-hô-lăn*, "abundant roots" (one of the Umbelliferæ not identified) in his hands and, as he rubs, prays for the welfare of the people. This prayer is sometimes, at least, addressed to *Nin'-nî-săn* (the earth). It seems to be extemporized for the occasion, as are many of their prayers. When he has rubbed the root fine he places it in the fire.

The dancing is done by regular stamping of the foot on the

* I believe the priest goes through several days of preparation for the dance.



PLATE 29. Basket Dance, Hupa Valley, California.

ground and moving the body and deer-skin up and down. While the men in the line are thus engaged, two men similarly dressed and painted, but having tsě-l-ně-hwăn (sacred red flint) in their hands instead of the deer-skin, move majestically from opposite ends of the line, passing at the middle. They face the dancers and hold the flint* about as high as the head, in their right hands with the palm toward the line. Afterward two men march in the same manner carrying tō-ně-hwăn (black volcanic glass). These bearers of the sacred flints have a different headdress from that worn by the other dancers. A row of curved tusks of some sea animal is attached to a piece of buckskin. This is placed on the head so that the row of tusks encircle the forehead and the buckskin extends over the crown of the head.

During the dance the leader in the middle sings songs, which he has composed for the occasion. The songs are without words and are sometimes in a minor key. The most gifted singer of the tribe, when asked how he composed these songs, said that sometimes he dreamed them, sometimes he heard them by the river side or among the trees on the mountain top. The diet and manner of life of the singer is regulated during his preparation for the ceremony. Fasting no doubt assists him in the hearing of these songs which other ears do not catch.

They dance here at Hō-ŭng-kūt one day and a short time the next morning. Then they go down by boat to Tsě-mět-tă, "pocket-in-the-rocks" (mouth of Hosler Creek). They dance here two days and then occurs a boat dance as they move down the river to the Saxon rancheria, a little above the mouth of Socktish Creek. Three canoes are used, with ten dancers in each. A gentle motion is imparted to the canoe by swaying the body without lifting the foot. They spend one night at the Saxon place and the next day go by boat to Tsě-lŭn-tă, "place where children play" (near N. Campbell's). They dance here two days as at the first two dance-grounds. After

* These flints are large, one specimen examined being about twelve inches long by two and one-half inches broad. They are considered very valuable, and together with the white-deer-skins are held not as personal property, but in trust for the tribe as the property of the dead.

each day's dancing they go back to a point above the mouth of Mill Creek, where they gamble.

Next they leave the river and go up Bald Hill to *Et-tük-ki-lai*, "among the oak tops" (near Charlie Saxon's), where the final dance is held. The second and last day at this place is the great occasion of the celebration. No one is too busy to attend on that day. The priests and old men repeat to the people the myths concerning the origin of the dance, and rehearse the moral and ceremonial law as they have received it from their fathers.

The people of the *Ki-hün-nai* world, who are dancing at all other times, desist to watch the *Hûpa* dance. The singer at the white-deer-skin dance, if he does well his part, will, after death, join the *Ki-hün-nai* beyond the sea, while all other Indians except the Shamans find an abiding place in the under world. The *Hûpas* believe the holding of this dance, in strict accordance with the ceremonial law, is pleasing to the divine powers and in return the tribe enjoys immunity from sickness and famine.

THE ORIGIN OF THE WHITE-DEER-SKIN DANCE.*

An old man and an old woman lived far up the Trinity. They had two children. The first one, a boy, grew up quickly. The second one, also a boy, could not grow. For ten years he remained small. He smoked tobacco all the time but did not eat much. The old man said: "I guess we don't want that boy any longer." The grown up boy said: "No, don't do that. I am going to take care of that boy; he is my brother." The old woman also wished to keep the boy. One morning the old man said to his wife: "We are going up the mountain to hunt. You come up to-night; we will meet you at such a place." So the old man and the elder son, who was now about fifteen years of age, went away up the mountain for the hunt. Some hours after, when the old woman had packed the camp outfit, she looked at the little boy and said to herself: "I will leave that boy." So she left him and arrived at the camping place some two hours after.

* As related to Mr. Goddard by a *Hûpa*. Mr. Goddard states that he left the language as much like the narrator's as possible.

When the men came at evening to the camping place, the boy noticed his brother was not there. He said: "Where is that boy?" The old woman replied: "He is too heavy to carry; I left him at the house." The grown boy cried and said: "I don't want you any more. I hope you will have bad luck. I hope you will die."

He started home and got to the house about five that evening. He went in, but the boy was not there. He looked all around outside but could not find him. He found tracks leading down the river. He followed them until he came to Mă-dīl-ting (place of boats). There he found a fish dam which his brother had built. On the west bank, at a place called Hō-ŭng-kūt, he knew by the signs that there had been a dance. He followed the tracks down the river to Tă-kī-mitch-tŭng (place of the Acorn Feast), where he found another fish dam. A little farther on at Tsě-mět-tă (pocket in the rocks) he saw signs of another dance. He went on down the river to Tsě-lŭn-tă (place where children play). There were signs of another dance here but he did not find his brother. The tracks were now fresh and led up the mountain to Et-tŭk-kī-lai (among the oak tops). Another dance had been held here. He followed the trail over the mountain and down the Klamath to Tă-tsě-ă-ting, where again he found signs of a dance and a fish dam. He continued his journey to Mŭk-a-nă-dě-wěi-ă-tong, the mouth of the Klamath. Here he saw fresh tracks and a large, fine-looking man standing on the shore. It was the younger son, now grown, waiting for his brother whom he, all the time, expected would follow him. The younger brother said: "I have been waiting for you. I want to see you and talk to you. Why did you people leave me at the house? I am sorry about that. You saw the places where I made the dances? Well, Indians will come into existence, in about a year. When they come they will make dances at these places. I am going away now; you will see me no longer in this country. I am going away across the ocean. Soon you will see a boat come. Do you want to go too?"

The elder brother replied: "Yes." The younger brother said: "No. You can't go." The elder one cried and said: "I want to go with you. I don't want to stay in this place any longer." The younger brother said: "All right. I will

take you. Put your hand over your eyes." The brother did so and when, after a time, he took his hand away he saw a boat in the surf manned by three or four fine-looking Ki-hŭn-nai (holy) men. They entered the boat and went away across the ocean. They are living in a nice level land where there is no sorrow, sickness or death. They dance there every night with many other Ki-hŭn-nai.

LECTURES.

A course of free public lectures, illustrated by objects in the Museum and by lantern slides, has been delivered in the Widener Lecture Hall of the Museum, on Wednesday afternoons at 4 o'clock, as follows:

January 16.—* Mr. Howard Crosby Butler, Princeton University, "The Deserted Cities of Syria."

January 23.—Dr. Walter Hough, United States National Museum, Washington, D. C., "The Folk-lore of Fire."

January 30.—* Prof. S. B. Platner, Western Reserve University, "The Recent Excavations in the Roman Forum."

February 6.—Mrs. Zelia Nuttall, "State Organization and Calendar of Ancient Mexico."

February 13.—George H. Pepper, American Museum of Natural History, New York City, "Recent Explorations of Ancient Pueblo and Cliff Houses in New Mexico and Colorado."

February 20.—Dr. John Harshberger, "Methods of Harvesting and Use of Seeds Among the American Indians."

February 27.—Mrs. Cornelius Stevenson, "Progress of Archæological Discovery in the Nineteenth Century."

March 6.—* Prof. M. L. D'Ooge, University of Michigan, "Delphi and the French Excavations."

March 13.—Mrs. Cornelius Stevenson, "Recent Excavations at Abydos."

March 20.—Mr. Stewart Culin, "The Yakima and Umatilla Indians of Washington and Oregon."

March 27.—Dr. George A. Dorsey, Field Columbian Museum, Chicago, "The Oraibi Soyaluna, a Winter Solstice Ceremony."

April 3.—Mr. Stewart Culin, "The Siouan Tribes of Montana and Dakota."

April 10.—Mr. James Mooney, Bureau of American Ethnology, Washington, "The Kiowa Indians; a Typical Buffalo Tribe."

* Under the auspices of the Archæological Institute of America.

NEW MEMBERS OF THE DEPARTMENT OF ARCHÆOLOGY.

The following have been elected to membership in the Department of Archæology of the University of Pennsylvania since the last issue of the BULLETIN, and down to April 1, 1901:

Aaron, Mrs. Carrie B.	Miller, Mr. Benjamin
Beary, Dr. Eli S.	Moffly, Mr. John D.
Bisler, Mr. Gustav A.	Montgomery, Rev. J. A.
Bodenstein, Mr. George	Munhall, Rev. L. W.
Bonsall, Dr. Charles F.	Nicolls, Mr. J. O.
Brown, Mrs. Sarah A.	Oldach, Mr. F.
Chambers, Mr. Harmon A.	Owens, Mr. John
Clark, Mrs. A. Wilson, Lans-	Petry, Mr. George
downe, Pa.	Potts, Mr. Robert B., Camden,
Cohen, Dr. Solomon Solis	N. J.
Comegys, Miss Clara	Quint, Dr. S. H., Camden, N. J.
Coons, Mrs. Eva	Raser, Mr. J. Heyl
Cowperthwait, Mrs. Joseph B.	Robinson, Mr. Thomas A.
Dick, Mr. Evans R.	Russell, Mr. Henry C.
Eckman, Dr. P. N.	Schofield, Mr. Richard F.
Fish, Mr. David	Schuyler, Mr. W. R.
Foulkrod, Mr. John J.	Shearer, Mr. A. B.
Fritz, Mr. Horace H.	Shoffner, Mr. W. N.
Gallagher, Mr. Charles J.	Shriver, Mr. John N.
Hagist, Mr. John	Smith, Mr. Uselma C.
Hazzard, Mr. R. T.	Starr, Mr. Edward, Wyncote, Pa.
Hirsch, Dr. Jacob, Munich, Ger-	Stengel, Dr. Alfred
many	Strittmatter, Dr. Isidor P.
Hitchcock, Rev. Dr. E. W.	Stulb, Mr. Joseph
Hollar, Mr. William H.	Taylor, Jr., Mr. Charles M.
Hollard, Mr. Joseph	Taylor, Mr. Charles Tracy
Hunter, Mr. T. Comly	Thomas, Dr. Charles Hermon
Jones, Mr. Edward Russell	Tousley, Dr. William H.
Keehmlé, Mrs. William C.	Tullidge, Rev. Edward K.
Kershaw, Mr. William	Tunnell, Mr. F. W.
Knight, Mr. D. Allen	Walsh, Dr. J. Francis, Camden,
Latshaw, Mr. Allen	N. J.
Lindsay, Miss C. A.	Wells, Dr. P. Frailey
	Wise, Dr. George G.

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BULLETIN
OF THE
Free Museum of Science and Art
OF THE
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VOL. III.

PHILADELPHIA, MAY, 1901.

No. 3.

THE SO-CALLED "PLUMMETS."

BY CHARLES PRABODY.

Under the subject of prehistoric ornaments and ornamentation occur one hundred and fifty, or more, headings; of the specimens represented by these headings the most numerous may be classified as pendants, and among pendants the most interesting are the so-called "plummets."

More or less complete notice of the subject has been taken by: Squier and Davis,¹ J. G. Henderson,² C. C. Jones,³ J. W. Foster,⁴ Abbott and Putnam,⁵ Charles Rau,⁶ C. C. Abbott,⁷ H. W. Henshaw,⁸ L. G. Yates,⁹ Gerard Fowke,¹⁰ Thomas Wilson,¹¹ C. C. Willoughby,¹² H. C. Meredith,¹³ in W. K. Moorehead's "Pre-historic Implements."

¹ Smithsonian Contrib. to Knowledge. 1. 1848. 235.

² Am. Nat. VI. 1872. 11. 641.

³ Antiq. So. Indians. 1873. 370 ff.

⁴ Prehistoric Races of United States. 1873. 230 ff.

⁵ Rep. United States Surveys W. of 100 Merid. VII. 1879. 190 ff.

⁶ Smithsonian Contrib. to Knowledge. XXII. 1880. 26 ff., and Prehistoric Fishing. 1884. 156 ff.

⁷ Primitive Industry. 1881. 227 ff.

⁸ Am. Journ. of Archaeology. I, 2. 1885. 105 ff.

⁹ Bull. Sta. Barbara Soc. of N. H. I, 2, 13.

¹⁰ Rep. Bureau of Ethnology. 1891-92. 110 ff.

¹¹ Rep. Nat. Mus. 1896. 453.

¹² Arch. and Ethnol. Papers of the Peabody Museum. I, 6. 1898. 46.

¹³ 1900. pp. 280 ff.

The specimens discussed may be described as pendants varying from straight, long and narrow to elliptical or nearly lozenge-shaped, and from about one inch in length to more than six inches. This paper will treat only of those of stone, with the exception of some of shell, which show analogous forms or qualities. The uses which have been suggested for them, or which may be suggested, are classified as follows:

- | | | |
|--|---|--|
| I. In connection
with fishing. | { | 1. Drag line sinkers.
2. Fishing line sinkers (above hook).
3. Fishing line sinkers (below hook).
4. Net sinkers.
5. Bait and hook combined. |
| II. In connection
with the chase
or warfare. | { | 6. As slingstones.
7. As black-jacks.
8. As bolas. |
| III. In connection
with textiles. | { | 9. Twine or sinew twisters.
10. Spinning weights.
11. Netting weights.
12. Weaving weights. |
| IV. In connection
with hitting or
grinding. | { | 13. Hand pestles.
14. Hanging pestles.
15. Paint stones.
16. Rubbing stones.
17. Hammers. |
| V. As ornaments. | { | 18. Ear ornaments.
19. Simple pendants. |
| VI. With supersti-
tious signifi-
cance. | { | 20. Amulets and
21. Charm stones.
22. Lucky stones. |
| VII. As drum-rattles. | | |
| VIII. As true plummets. | | |
| IX. As game stones. | | |
| X. In connection with phallic worship. | | |

Evidence may be (1) direct, as provided (a) by the specimens themselves and (b) as given by eye-witnesses of their use; or it may be (2) traditional as handed down by Indians or settlers, or it may be (3) by analogy based on similar articles among

other peoples—or it may be (4) negative, that is, there may be no reason why such and such a specimen may not have been used for any supposed purpose. Such a conjecture, later supported by evidence, is not altogether a bad method of procedure.

Of direct evidence we have little. To one man the specimens appear homogeneous, to another heterogeneous. The fact is that some specimens may be found to fit any theory, and that these specimens may then be connected by slow gradations with the most central typical objects of all. Direct evidence from eye-witnesses is untrustworthy, since probably every Indian now living has suffered some influence from the white man, and the Indians' memories and those of the oldest pioneers are neither long nor accurate enough to base dogma upon. Traditional evidence is traditionally unsafe and is moreover not abundant. Of analogy and of negative evidence there is plenty; therefore it is that absolute determination will often be impossible. Probabilities only in many cases may be established. The important evidence will now be presented.

I. *In connection with fishing.*—In a way the burden of proof is on those who say that the "plummets" were used for anything else, for all investigators give their use as fishing weights a respectful place in their lists. But to begin with, there comes the suspicion that some Indians using "plummets" learned their line and net fishing from the whites, thus practically for them disqualifying this use. Abbott and Yates both express doubt whether the Indians were acquainted with net fishing; Murdoch, in his article on the "Point Barrow Esquimaux,"¹⁴ mentions a native who spoke of a time when there were no nets, and Dorsey¹⁵ gives evidence that the Omaha learned to make their lines of twisted horsehair after the coming of the whites. But, *contra*, the presumption in favor of the use of line and net by the Indians is too strong to be upset by so little evidence. Then, in the way of direct proof, two meshes of a net are said to have been found among the Mammoth Cave specimens.¹⁶

¹⁴ Rep. Bur. Ethnol. 1887-88.

¹⁵ Rep. Bur. Ethnol. 1881-82.

¹⁶ Prehistoric Fishing. 155, etc.

Cabeza de Vaca,¹⁷ the first European to give an account of the interior, refers to nets, and the anonymous Portuguese "Knight of Elvas,"¹⁸ speaking of De Soto's expedition in 1539-43, says that the Spaniards caught fish with nets furnished by the Indians. Lawson¹⁹ says of the North Carolina Indians, 1714, that they caught shell-fish with oysters on a string; Brinton¹⁹ of the Lenapé that they seemed to have known the use of hook and line; Wyeth²⁰ speaks of the Shoshoni's strings and nets; Hearne,²¹ 1769 and following years, speaks of angling and netting among the northern Indians, and Father Charlevoix,²² of the Canadian Indians and of their net ceremonies. Roger Williams²³ and Van der Donck²⁴ also afford affirmative evidence. Even in the last extremity, even if nets and lines were unknown, some of the "plummets" may have been used as sinkers for the grapevine ropes which the Indians dragged along the bottom in order to drive the fish into weirs,²⁵ etc. When it is considered, moreover, that the Indians made rope so good as to be preferred, in one instance at least, to that of the whites,²⁶ it may safely enough be assumed that they used fishing lines and nets, and that these were provided with sinkers. In fact, two authors reason the other way and deduce fishing from the presence of "sinkers."²⁷

For the use of sinkers in later times we have the fact that the Chinook at the mouth of the Columbia used net sinkers,²⁸ and Swan is quoted²⁹ to the effect that round, notched beach pebbles one pound in weight are used with nets one hundred to six hundred feet long, and seven to sixteen feet deep. Rau also notes, as anyone may, that lead sinkers of a similar shape

¹⁷ Prehistoric Fishing. 156.

¹⁸ Prehistoric Fishing. 290.

¹⁹ Essays of an Americanist. 184.

²⁰ Prehistoric Fishing. 294 f.

²¹ Prehistoric Fishing. 274 f.

²² Prehistoric Fishing. 272.

²³ Prehistoric Fishing. 277.

²⁴ Prehistoric Fishing. 281. Seventeenth century.

²⁵ C. C. Jones. So. Inds. 338.

²⁶ See Peter Kahn's Travels. Ed. 1771. II. 131 ff.

²⁷ C. C. Jones and W. H. Poole. Am. Anthropologist. XI. 2, 198.

²⁸ Rau. Am. Naturalist. VII. 139 ff.

²⁹ Prehistoric Fishing. 305.

to "plummets" are still sold. The Point Barrow Esquimaux have netting weights, and there is a present Canadian custom in catching lake trout, of attaching a lead sinker below the hook, allowing it to rest on the bottom, leaving the hook free.³⁰

Nets, lines and sinkers being established, were "plummets" used as sinkers? Their shape, their manifest destiny for suspension, and the fact that it is the easiest way to account for the majority of them point to an affirmative answer. Again, they are oftenest found near fishing waters. The most prominent finds are from the seashore counties of Maine, Essex County, Massachusetts, the mounds of the east and west coast of Florida, and from the shell heaps and other places in southwestern and western California. Others come from equally significant places. One of red stone is from Nova Scotia, from an old spawning bed in the Salmon River; otherwise these are rare in that province.³¹ In New York, Beauchamp asserts that they seem confined to good fishing places,³² and in Massachusetts, near Salem, they are found mostly along shore. The most striking fact is provided by that collection spoken of in Meredith's article, where he notes that six hundred have been taken from a bed of an extinct lake in Sonoma County, California, within three years. This lake existed in 1870, and was then drained; allowing a rate of picking up of two hundred a year, he figures out a possibility of six thousand specimens yielded by this lake of three hundred acres. Apparent exceptions to this rule work for rather than against it: for instance, the dozens of "plummets" found on a hilltop in Pennsylvania³³ are of a type, namely, that of the dumb-bell variety, that may the most reasonably of all be called sinkers. It is easier to assume that these were made in a hilltop workshop and carried down than to predicate other uses for them. The hematite "plummet" spoken of by Yates as having been imported into southwestern California, was found near the coast; but hematite "plummets" may be a class by themselves. In a certain private collection, gathered by Moorehead, are some volcanic stone "plummets" from Arizona, but their exact locality not

³⁰ T. G. B. Lloyd. *Journal of Anthropol. Inst.* October, 1875.

³¹ Piers. *Nova Scotia Inst. of Science.* 1894-95. 50.

³² *Polished Stone Implements of New York.* 41.

³³ *Rep. Smiths. Inst.* 1883. 876. (Ruth.)

being known, one cannot be sure that they were not used for sinkers. Further, there is a California specimen in the Peabody Museum (Plate 33), with asphaltum on both ends and traces of the line still visible, and Florida specimens have also been found with bitumen on them, as if for attaching the string. Cushing mentions one with the string still preserved. So that very many, perhaps the majority of specimens, come from places where fishing could be, and probably was, carried on. So much affirmative evidence have we for the sinker theory from the sites near fishing grounds. But there are arguments for the other side. The provenance of "plummets" from these sites can be explained by the fact that most of the population spent a greater part of their time by the water, and would there leave their remains. Besides, practically, it is not easy to point to many sites which are not near fishing waters, creeks, rivers, lakes or sea. So that it is by no means necessary to assume all were fishing weights because they were found near water. As to the specimens with the string preserved, all objects hung on string are not fishing weights; the very complexity of the arrangements on the Cushing specimen speaks against its use as a mere sinker. He thus describes it:³⁴ "The delicate cords intricately and decoratively interlaced to and from the groove cord surrounding the neatly turned rim, to the central knob over its small flat head, were still perfectly visible, the whole having been coated with shining black gum or varnish."

Again, contrary to the sinker theory, one may say that while most of the specimens are grooved or perforated for suspension others are not, and in many cases the groove seems too small and shallow to hold a cord tightly, especially considering the peculiar tightness necessary in fishing. If the weight should slip it would be lost. Yet it is wonderful what skill the Indians had in fastening damp string around such specimens. The fact, however, of the existence of specimens with extra grooves at right angles to the cap, or with flukes like an anchor, seems to argue that the Indians felt the need on occasion of a firmer fastening; perhaps these last may actually have been fishing weights as well as the perforated ones which Henshaw allows to be such. The advocates of the sinker theory answer the

³⁴ Florida Key Dwellers. 47. Proc. Am. Philos. Soc. XXXV. 153.



36,292

36,403

15,615

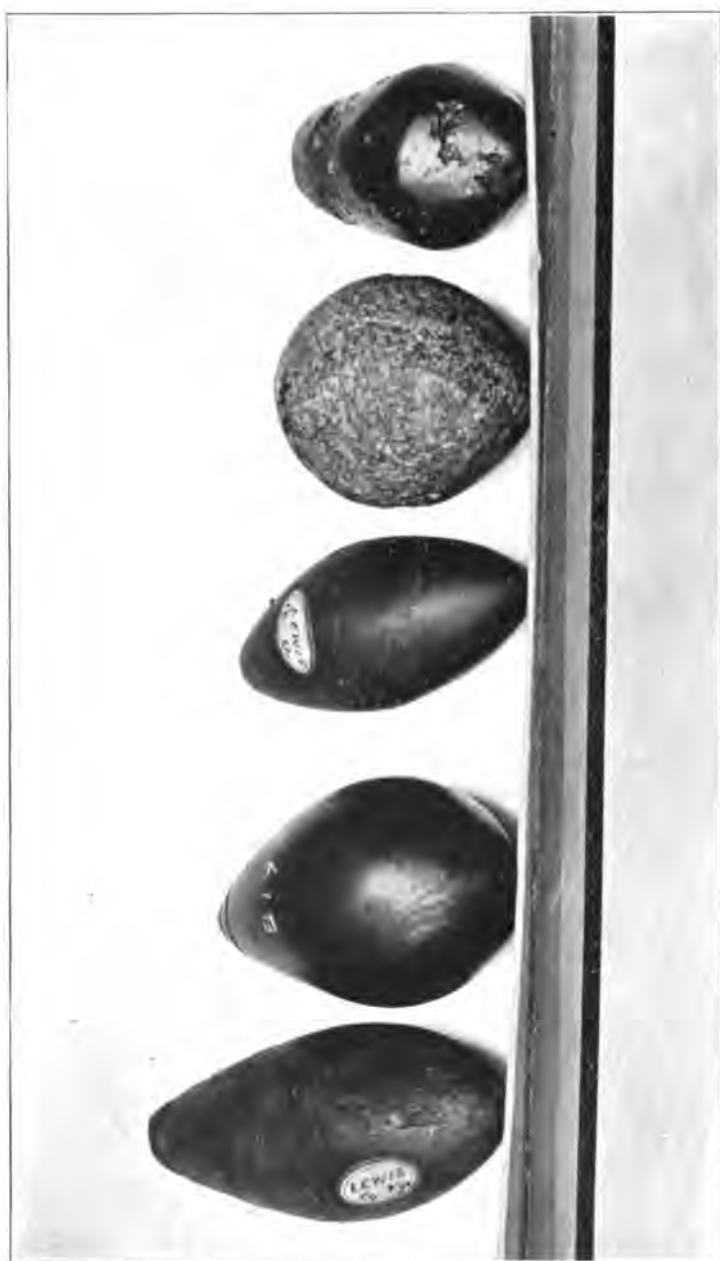
13,921

50,669

20,912

13,923

PLATE 30. Plummets from Ohio, Peabody Museum of American Archaeology and Ethnology.



42,011

42,354

42,317

8,493

42,336

PLATE 31. Plummets from Kentucky, Peabody Museum of American Archaeology and Ethnology.

argument of the easy loss in water by pointing to the asphaltum and bitumen, which could always make the line fairly fast; where these were absent pitch could be used. But the very great rarity of specimens with such remains upon them argues that this method was not very much used; either most of our present specimens were used as they are now or the grooves have been worn away by use and weathering. As a whole, the smallness of the grooves points to some other use than in fishing. The third argument against their use as sinkers is the careful workmanship displayed. The California "plummets" of the Yates collection, those from near the mounds in Louisiana, the Ohio and Kentucky specimens in the Peabody Museum (Plates 30 and 31), and some of the Florida specimens seem to exhibit entirely too much care and pains to have been used as mere sinkers. It is true the Indians used care in the manufacture of common articles and that time and labor were not counted; it is true that the Esquimaux carved very wonderful stone and ivory sinkers (Plate 35), and used them; it is to be noted, however, first, that the last named almost invariably make two holes, as if for safety; second, that they have more time for carving and such occupations during the long winter; and third, that they affect decorative carving a great deal more, as a whole, than do or did the Indians. The rare examples of carved "plummets" are like enough the type to be put unhesitatingly in that category, but too extraordinary to be given common uses. One from Florida,³⁵ Turkey Creek mound, represents a duck's head, and one an Indian's head, this is from Illinois.³⁶ Mr. Willoughby has a drawing of one³⁷ of a sort of cross-shape, and Douglas reports "plummets" of fantastic animal shapes. Then further, if the story which comes from the last century is true, some of the Cincinnati "plummets" are of materials too valuable for ordinary uses, for the Indians were respecters of stones to a degree. These "plummets" were of porphyry, jasper, crystal, granite and hematite.³⁸

³⁵ C. B. Moore, "Cache of Pendent Ornaments."

³⁶ Henderson Am. Nat., VI, 647.

³⁷ From Maine.

³⁸ R. Clarke, Prehistoric Remains of Cincinnati, 7ff.

Again, we may adduce the argument of the California Indian talking to Henshaw: "Why make such sinkers when the beach supplies sinkers in abundance? Our sinkers were beach stones, and when one was lost we picked up another." This is full of common sense and applies with force to all regions, save, perhaps Florida, where beach stones are not numerous.

Not only so, but there are thousands of stones carelessly notched or grooved that almost certainly must have been used as sinkers. Where these are found together with "plummets" there would be a presumption in favor of some other use for "plummets," but there seems not to be any strict connection between the occurrence of one and the other. In the Peabody Museum, for instance, two or more kinds occur from Nova Scotia, Massachusetts, New York, Delaware and Nicaragua. A preponderating kind occurs from Michigan, Maine, Florida and Ohio. In fact, the practical distribution is as follows: "Plummets" with caps or plain are found in Maine, Massachusetts, Rhode Island, Florida, West Virginia, Tennessee, Alabama, Missouri, Ohio and Illinois. "Plummets" with holes, in Ohio, Illinois, Arkansas, California and Louisiana. Sinkers of a flat type,⁴⁰ in Rhode Island, New York, New Jersey, Pennsylvania, Ohio, Tennessee, Utah, California and Oregon.

Maine and Florida, perhaps, are the only States where the absence of other sinkers in the graves and mounds might point with any certainty to the use of "plummets" as sinkers.

So, considering their rough workmanship, it may be fairly assumed that some of these "plummets" in Maine were used as sinkers. (Plate 32.)

The analogy of other nations and peoples is almost entirely in favor of sinkers not "plummet"-shaped. The flat type is found in Baden, and is at present in use in Prussia; the dumb-bell type is found in England. The Indians of the Northwest Coast used pebbles—natural, notched or grooved; the whites along the Susquehanna used natural stones or the dumb-bell type, and those along the Great Lakes used notched flat pebbles. Even the clay sinkers of the Lake Dwellers have turned out to be probably spinning or weaving weights.

³⁹ From Rau's Examples.

⁴⁰ Prehistoric Fishing, 156-57.



51,014

50,857

50,864

50,904

50,898

PLATE 32. Plummets from Maine, Peabody Museum of American Archaeology and Ethnology.

Therefore, when simpler forms have been and are so universally used, unless strong direct evidence exists we cannot, with Rau, classify all "plummets" as sinkers. Foster, Nadaillac and Moorehead are all convinced that some are of too fine a nature for that use.

Some of them—those "plummets" about which we have no direct evidence to the contrary—may possibly have been used as fishing sinkers, but those of intricate, exquisite or imitative workmanship, or of rare material, were probably not. In Maine and Florida it may be admitted for the present that some were probably sinkers.

Before leaving the subject the tale told Mr. Willoughby, of the Peabody Museum, by Big Thunder, an Abenaki Indian, about the Maine "plummets" will be of interest. It was to the effect that they were greased and used as bait for salmon. After the fish were caught they could be used over again. The tale hardly deserves serious mention, save for a peculiar "plummet" from Notre Dame Bay, Newfoundland,⁴¹ with a hook-like extension on one side. The two together make presumption in favor of such an occasional use.

II. *In hunting and warfare.* The use of "plummets" as sling-shots and slingstones is hardly to be considered. Effective in striking, they are too carefully made, as a whole, to be thrown away, and if used thus we should find them more scattered and more by themselves as surface finds; it should be mentioned though, that the Indians of Lake County, California, go to the trouble of making clay balls for this purpose.

The use as black-jacks is more probable. Lewis and Clarke⁴² speak of the Shoshoni that they used an instrument consisting of a wooden handle twenty-two inches long, covered with leather with a thong at the end two inches long and a stone of two pounds weight in leather. Now while "plummets" are not nearly so heavy they might still make an effective weapon of the sort. Abbott⁴³ remarks on a grooveless "plummet" from California, that it might have been encased in skin and attached to a flexible handle. Carver,⁴⁴ writing of

⁴¹ T. G. B. Lloyd, *Journ. of Anthropol. Inst.*, October, 1875, 241.

⁴² See C. C. Jones, *So. Inds.*, 372.

⁴³ *U. S. Survey* (op. cit.), VII, 194.

⁴⁴ See C. C. Jones, *So. Inds.*, 371.

the Western Indians at the end of the last century, remarks that they had a curiously wrought stone with a string a yard and a half long tied to the right arm. They carried the stone till within reach of the enemy. The "curiously wrought" is a reminder of "plummets." A further analogy is furnished by a New Zealand "plummet"-shaped perforated stone in the Peabody Museum (Plate 33), less than three inches long, which is used somewhat in the same way. The size of this is nearer to that of most of the "plummets."

One may say that the class of larger "plummets" and that the large, grooveless ones may have thus been used.

Against the use as a bolas is our ignorance of whether the United States Indians used this weapon; it is in use in Patagonia and consists of one or two stones of one pound and a rope three or four yards long. A better analogy is furnished by the Peabody Museum in the Esquimaux bolas. (Plate 35.) Here we have eight carefully finished ivory pendants with holes, joined together and hung on strings, the whole being slung at ducks, let us say, winding itself about them thus making possible the recovery of both ducks and bolas. Mr. Willoughby says he has seen an almost exact copy of the "plummet" shape in one of these weapons. A number of the "plummets" of the Maine or Florida size would thus do excellent execution, the only trouble is whether the light grooves and small caps would hold the strings and whether the "plummets" would not get broken one against the other. But at any rate this theory is well worth considering, for Maine "plummets" as an alternative for the sinker theory.

III. *In connection with textiles.* A similar question to that in the case of fishing arises at first, as to how far the Indians were acquainted with spinning and weaving; it may safely be said that practically all over the United States they knew the arts in some form or other, and that at any rate, netting was known somewhat and still more extensively the use of twine and twisted string. All these would need weights for twisting and steadying. In fact, as far as cloth is concerned, prehistoric specimens have been found in Illinois, Ohio, Iowa, Georgia, Kentucky and probably elsewhere.⁴⁵ Even while Yates says,

⁴⁵ Thomas, *American Archæology*, 108.



13,591

244, New Zealand.

13,672

PLATE 33. Plummets from California and New Zealand, Peabody Museum of American Archaeology and Ethnology.

"Indians of southwest California used no textile fabrics that required spinning or weaving," we have Bowers' earlier statement⁴⁶ that coarse cloth (not necessarily very old) has been found with skeletons of Santa Barbara Indians.

We have little or no direct evidence for believing that "plummets" were used in this way in America, and Mr. Willoughby, whose opinion on Indian archæology is rated high, is not inclined to believe that in New England, at any rate, they were so used. Another strong argument against their use as spinning weights is the existence in so many places of perforated pieces of stone or terra cotta resembling foreign spindle-whorls, which attached to a winding-stick would have served the purpose better. The Peabody Museum contains specimens of this kind from New Jersey, Ohio, Kentucky, Tennessee, Arkansas, Arizona, New Mexico and California; that two kinds should have been needed is improbable.

For twisting strings or thongs "plummets" would have been very useful and Meredith quotes an old pioneer, J. C. Simmons, who said that in 1852 he saw charm stones or "plummets" used to twist lassos used by the Indians at San José.

Their use in netting, wattling,⁴⁷ plaiting or weaving is more probable. Deans⁴⁸ shows us an instrument of bone with a notch as if to guide the thread, the whole being used as a shuttle. Perhaps that was the use of many of the slender ones. While the present day Indians in other places use other means of keeping the warp straight in a loom, they may not always have done so, and this a good use for many of the "plummets."⁴⁹ The existence of spindle-whorls would not interfere with this theory, and the workmanship and care put on them would not have been lost under water by careless attaching. The analogy of the Lake Dwellers is here pertinent; many of the weights formerly known as sinkers have been considered weaving weights since Paur constructed his famous loom on the Neuchatelois plan.⁵⁰ Here, too, have been found innumer-

⁴⁶ Kansas City Review, VII, 12. 1884, 749.

⁴⁷ Cushing, Key Dwellers, 47.

⁴⁸ Jour. Anth. Inst., April, 1876.

⁴⁹ See Ritschl, Jahrb. d. Vereins von Alterthumsfreunde im Rheinlande, XLI 9, and XLIII, 209.

able spindle-whorls. Weaving weights were from nine ounces to three pounds five ounces in weight and correspond, somewhat overlapping in maximum size to the "plummets." The heavy ones Ritschl assigns to whole pieces. Weights are among the commonest archæological specimens and in Europe come from Athens, the Euxine, Sicily, Italy, Southern France, Spain, the Rhine and Holland. They are often of clay, of more or less conical shape, and perforated. Schliemann gives a picture of a perforated one of jasper from Mycenæ,⁵⁰ which could have been used thus, while the smaller spindle-whorls would have found use earlier in the development of the cloth. A vase painting in Baumeister⁵¹ gives a picture of a loom with a string of weights and Seneca says, "*Quemadmodum tela suspensis ponderibus rectum stamen extendat.*"⁵² Similar ones are in use now. Some of those figured by Ritschl have inscriptions, one of which he makes out to be of a sort of talismanic significance. This analogy will be in place later. So in spite of the lack of direct evidence for the use of weaving weights, it is not an unreasonable theory that this was the destination of many of the better wrought specimens. Almost certainly they must have been used for twisting operations of some kind.

IV. *In connection with hitting or grinding.* Their use as pestles is only substantiated by a report of a "plummet" being found in Massachusetts in a mortar (now in the Salem collection) and a report from Amesbury of another of like origin,⁵³ and, second, by "plummet"-shaped instruments in California having been found in connection with mortars. The Massachusetts series too tends to the pestle shape. (Plate 34.) Professor Putnam well says that with stone mortars they would produce grit, while with wooden ones they would have worked satisfactorily. Perhaps the larger ones were hung, as Willoughby describes, to an elastic branch of a tree and used with this aid for grinding in the wooden mortars which occur in New England. True, few show signs of inci-

⁵⁰ Mycenæ and Tiryns, 100.

⁵¹ S. v. "Weberei."

⁵² Sen. Epist. 90, 20.

⁵³ Bull. Essex Inst., June, 1873, 111.



10,599

1870, R.

16,060

22,983

PLATE 34. Plummetts from Massachusetts, Peabody Museum of American Archaeology and Ethnology.

dental wear, but they are so rough that wear and tear would be less remarked.

Why some of the small Maine "plummets" may not have been used for rubbing the paint which occurs in such quantities there, is not easy to see. Their angular lower end would be inconvenient in a regular pestle, but the smaller ones could be used to rub the paint against the sides of a small mortar very well.

Squier and Davis think the hematite specimens may have been used to make paint, but this seems unlikely in view of the existence of other hematite paint stones.

For the use as hammers, Professor Putnam shows one from California with marks as if made by hitting, and in Brower's "Missouri River" is a picture of Sitting Bull in Sioux tribal costume holding a hammer or club composed of a handle and of a dumb-bell shaped "plummet," apparently about three inches in length. Very likely many of this dumb-bell type were used as hammers though the lack of markings urges easy treatment. The transition to banner-stones is short, and there is in the Peabody Museum one of the latter fastened on the end of a stick as a sign of rank among the Omaha. Beauchamp's "plummets,"⁶⁴ Nos. 93 and 95, have markings as if used in some such way; but the use of pear-shaped "plummets" as hammers must have been unwieldy and rare.

V. The use of "plummets" as ornaments is more or less bound up with their superstitious use. Ornament among all primitive people is hard to separate in its simplicity from the idea of fetichism, talismans, amulets and religion generally. Cushing⁶⁵ says: "To a certain extent all personal adornments, so-called, of early peoples are ceremonial or sacred," and Culin, in a lecture at the University of Pennsylvania in 1900,⁶⁶ derives ornament from religious sentiment. This overlaying of plain things with superstition will be of importance later. At present the evidence of the use of "plummets" as ornaments comes first from the real intrinsic beauty of the specimens in quartz, hematite or banded slate; second, from

⁶⁴ Pol. St. Imps. of N. Y.

⁶⁵ Key Dwellers, 49.

⁶⁶ Bull. Free Mus. of Science and Art., II, 4, May, 1900, 236.

the shape and size of some of the Florida specimens which would, even now, not be too large for pendants, and third, from the well-known love of the Amerind for personal decoration. Lawson speaks of the North Carolina Indians in 1714, as wearing great bobs in their ears.⁵⁷ Schoolcraft⁵⁸ says ear bobs are worn by the Winnebago and Dakota. Holmes⁵⁹ quotes Wood, who described the Northern New England Indians of the early seventeenth century as wearing pendants in their ears as forms of birds, beasts and fishes carved out of bones, shells and stone. Jones on the Southern Indians says that they wore crystals of quartz in their ears, and Culin on



Fig. 29.
Ear-weight,
Borneo.
Length, $3\frac{1}{4}$ inches.
Free Museum of
Science and Art,
Furness Col-
lection.

the Florida Indians of 1492 and Brazilians, mentions their weighting their ears with pendants so that they hung over, continuing that pendulous ears are among the signs of saint-hood upon images of the Buddhas.⁶⁰ (The custom persists in Borneo; see Bornean ear-bob, University of Pennsylvania, Fig. 29.) It is not necessary to multiply examples. The comparison of labrets, shell chains, known earrings of copper, etc., proves that most of the "plummets" were neither too large nor too clumsy to be worn as ear pendants. The existence of a "sinker" of a quartz pebble, with facets, grooved for suspension, from Florida in connection with the Indian well-known treasuring of quartz and with their wearing it in their ears, is fair evidence that some of the "plummets" were ornaments. Besides there is no necessity that they all should have been "earbobs;" they may have been worn hanging from neck or waist; the long, large and beautiful jade halves and quarters of the University of Pennsylvania Costa Rica collection, evidently have been suspended somewhere and prove that the weight of most of the "plummets" was not too great. The shape of some of the "plummets" is in line with the

⁵⁷ See Jones, *So. Inds.*, 371. Note.

⁵⁸ *Amer. Ind.*, IV, 58 and 69.

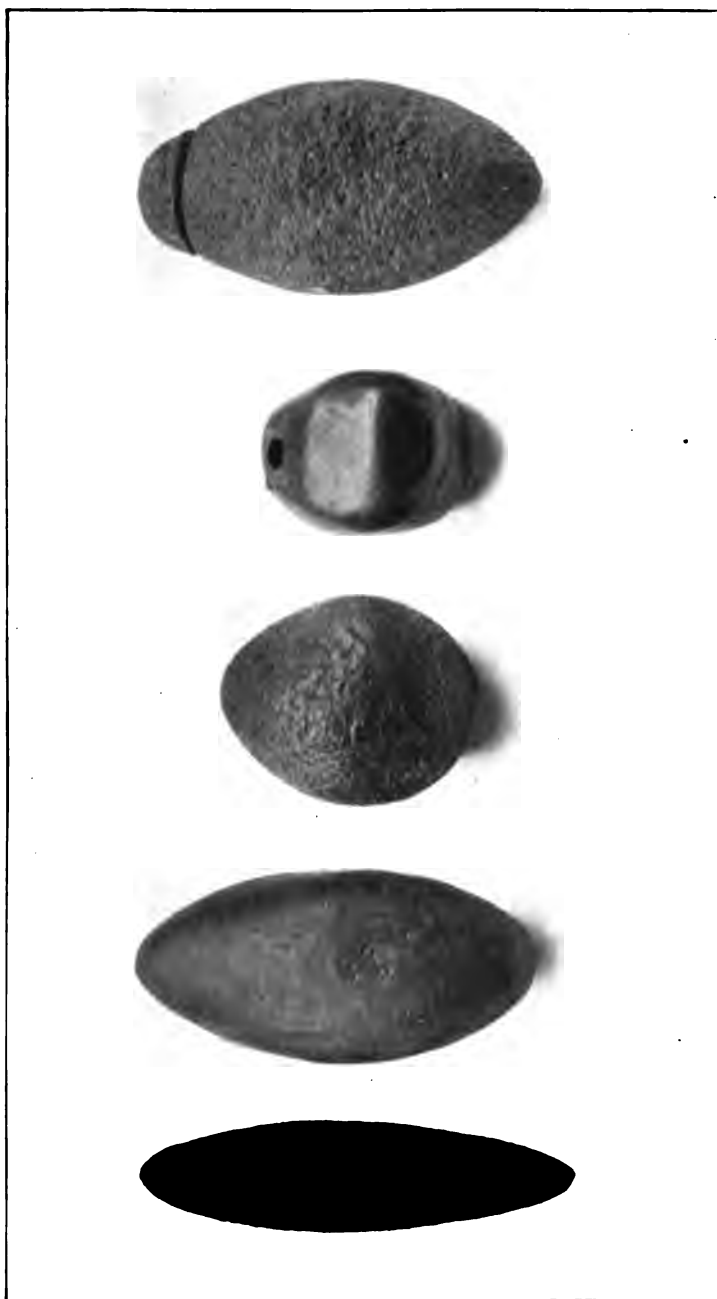
⁵⁹ *Bur. Eth. Rep.*, 1880-81.

⁶⁰ *Lecture. Op. Cit.*, 238.



50,257 52,074 50,255 50,257

PLATE 35. Esquimaux Plummets and Bolas, Peabody Museum of American Archaeology and Ethnology.



14,310

14,314

14,523

14,311

14,651

PLATE 36. Plummets from Mississippi (Dickeson Collection), Free Museum of Science and Art.

Indians' favor shown to toothlike or triangular pendants; teeth were worn sewn on garments and in various ways, and pendants were manufactured in imitation of this shape."

VI. As shown above, closely connected with ornament is superstition, and the use of some of these stones in rites and ceremonies is established. Not too far to repeat the reports of others, Henshaw has shown them to be used as medicine or sorcery stones, for bringing rain, curing the sick, and in various ceremonies, and practically the same uses were observed among the San Buenaventura Indians; the stones were useful in luring fish, etc. The pear-shaped specimens were the most efficacious.

Yates' well-known article established their use among the Napa Indians of California. They were carried in a medicine bag and were hung over creeks to entice fish and in hunting. They were also put on the front of canoes. In Santa Barbara County they were said to have been worn for defence, to make the wearer impervious, and the biting of them in war-time induced invisibility. Yates thinks that the majority of charm stones found in central California, were made by a previous race, who occupied the country before and at the time of the great volcanic outburst which formed the Table Mountains. His examples of very old stones show that same finish of execution, however, which has thrown such doubt on the antiquity of the specimens adduced in favor of the genuineness of the Calaveras skull. That very many California "plummets" were not charm stones, is pretty well proved by Meredith's lake find, but no longer may such a use for some be doubted. How is it elsewhere? *A priori*, that originally plain implements should take on a religious significance is highly probable. Meredith's experience in trying unsuccessfully to buy a set of lucky game bones showed him how easy it would be for a successful sinker to become a charm. Henshaw quotes Murdoch on the Point Barrow Esquimaux, that a two-pound sinker was worn on the breast while fishing, otherwise hung up at home. Any number of instances of the clothing of old or curious stones with new qualities might

⁶¹ Nat. Museum. Nos. 113,943, W. Va.; 97,764, N. C.

be cited; celts and halves of banner-stones and broken soap-stone pots are often found perforated as if for wearing as charms. In fact, one of the "plummets" from Maine has been almost certainly made from an old celt as if to preserve its peculiar virtue. The Pueblo Indians of Tusayan use the stone implements in their ceremonies that thirty years ago they had been using in common life; perhaps when the Indians changed their style of sinker or weaving weight they began to venerate the old ones and put them away with other precious things in graves. L. M. Turner⁶³ says that the Hudson Bay Esquimaux in order to drive the deer in desired directions hang up an image of a successful hunter in full dress. On this suit are seen little double-ended leaden talismans, shaped not unlike some of the "plummets," and about an inch or less long. Similar talismanic use elsewhere for "plummets" it would not be hard to assume.

Common things were often taken as symbols of office,⁶⁴ *e. g.*, arrow-heads, spears, knives, bows, moccasins, etc., and symbolic ornaments were worn, as hawk or eagle feathers to denote swift or lofty vision. Sinkers and weights may have been thus worn by fishermen or weavers, the specimen thus finally possessing the connotation of utility, ornament and symbolism.

The remaining uses suggested are at best sporadic, but may have been adopted at one time or another.

VII. In Schoolcraft⁶⁵ is a picture of some rattles used to beat an alarm upon a drum where the beater is of a "plummet" shape and hung to a handle. This was in use among the Minnesota Indians.

VIII. The only reason why the name or use of "plummets" was ever suggested for these stones is probably their appearance. The Indians had little need of a plumb line and not one of the specimens would hang straight by itself. Henderson is probably the only authority believing in this use. He states truly that they might be used also to establish a level and quotes the mathematical accuracy of the Mississippi Val-

⁶³ Bur. Eth. Rep., XI. 1889-90. 196.

⁶⁴ Peet, Am. Antiq. XVI, 2. 1894. 83.

⁶⁵ Am. Ind., IV, 496.



14,334

14,317

14,115

14,313

14,312

14,139

PLATE 37. Plummets from Mississippi (Dickson Collection), Free Museum of Science and Art.



85

57

59

60

61

PLATE 38. Plummets from New Jersey, Free Museum of Science and Art.

ley works in support of the necessity of some such implement; but as a whole the theory may be dismissed as inadequate.

IX. The only objection to their use in games is the apparent lack of any game where they are known to have been used. One may, however, compare the game-stones used by the Kwakiutl in the "lūkia" game.⁶⁵ (Fig. 30.)

On the whole, then, we have a series of artifacts developed in shape from a slender, pointed pendant to thick lozenges and globes, and to longitudinally grooved stones and notched

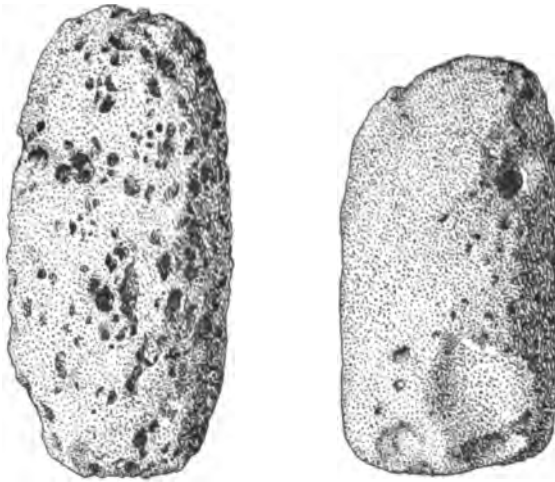


Fig. 30. Gaming Stones for Lūkia, Kwakiutl Indians. Length, 5 and 4½ inches.
Free Museum of Science and Art.

sinkers in one direction and to large pestles in another. They are found from Maine to California and from the northwest coast to Florida. Their materials vary from the commonest rock and shell to syenite, hematite and quartz; the materials are usually, though not always, native.

All things considered, probably many of the New England "plummets" were originally sinkers, while some of the larger ones were used as pestles and some of the smaller ones as bolas; many of the Florida specimens were probably sink-

⁶⁵ The stones to which my attention was called by Mr. Culin, are of lava, about five inches in length, and are thrown at a mark.

ers, while the smaller and better worked ones were used as ornaments. The California specimens have been proved to be, many of them at least, charm stones. The beautifully worked and symmetrical specimens from the central civilization were very likely, in the absence of any better theory, weaving weights. Other uses in connection with fishing, the chase, and domestic pursuits, may have been common.

In all cases, at one time or another, it is very probable that upon the plain implements was put a layer of superstition or of reverence, investing them with new powers and lending them that value which caused them to be put away in the graves and mounds where they are so often found.

8

A SUMMER TRIP AMONG THE WESTERN INDIANS.*

(THE WANAMAKER EXPEDITION.)

BY STEWART CULIN.

CHAPTER IV.

OREGON: PORTLAND; WASHINGTON: TACOMA, SEATTLE,
MAKAH RESERVATION.

I made the journey alone from San Francisco, to Portland, a journey broken only by the momentary stop at the famous Shasta Spring. Arriving at Portland, early in the day I visited the city hall and inspected the museum on the upper floors. The building itself is admirably constructed, but the "museum" is unworthy of serious consideration, comprising polished sea shells, stuffed birds, pieces of curiously gnarled wood and a few Indian relics without labels, all unworthy of the great State of Oregon. The Oregon Historical Society has a room on the third floor of this building, but I was so discouraged by what I saw I did not attempt to obtain access to it. Then, with much difficulty in ascertaining its location, being repeatedly directed to photograph galleries instead, I visited the Art Gallery, which I was told was the finest on the Pacific Coast outside of San Francisco. The gallery is located in the upper floor of the Portland Library. The library, a private corporation, is housed in an artistic building, designed, I was told, after the Boston Public Library. The museum was closed for the summer months, but one of the women assistants in the library showed me through. It contained only a collection of casts from the antique, and photographs and lithographs of paintings. The casts in a long, well lighted gallery, are well arranged and labeled. The prints are kept in a special room in well designed cabinets, about the walls, and on screens on the floor, the works of the same

* Copyright by Stewart Culin.

artist being kept together and the pictures changed from time to time. A fee of ten cents is charged, school children paying a dollar a year. This museum is entirely free from miscellaneous rubbish, and while highly conventional, is notably well arranged and must serve a useful purpose. The same amount of intelligence and money, however, applied to the creation of an ethnological collection from the State of Oregon would have resulted in a far more important and valuable museum, which would not only be one of the sights of the city, but would attract attention throughout the world. Leaving Portland at two o'clock, I abandoned the Southern Pacific and took the Northern Pacific for Tacoma. The luxurious cars on this road were in marked contrast with the uncomfortable cars with dear and unsatisfactory service on the Southern Pacific line. The ride to Tacoma along the Willamette, afforded glimpses of much picturesque scenery, and the passage of the Columbia River, the train being ferried across entire, was an interesting experience. The towns along the line, however, are most forlorn. At Tacoma I found that Dorsey had gone to Seattle and was expected back shortly. I spent the evening with Judge Wickersham, who was on the eve of starting for his new post at Eagle City, Alaska.

Dorsey returned that night. He had procured from an old doctor of the Samamish tribe near Seattle a remarkable "spirit-boat" in which, when a person was sick, he voyaged to the under world to bring back the soul which was thought to have journeyed there. This boat, being a duplicate of one he had already secured for the Field Columbian Museum, he generously resigned to me.

In the morning we visited the Ferry Museum, in the upper floor of a handsome county building. This museum is in charge of an unpaid curator, an artist who paints local scenery. It was Sunday, and the building was closed, but we found the curator with Judge Wickersham, who was arranging his collection of Indian baskets and ethnological specimens as a loan during his absence in Alaska. The Ferry Museum occupies a unique place among museums. Its collections are more miscellaneous, and are arranged with less system than those of any museum I have visited. The labels, such as they are,

are misspelled and full of errors. Thus Ariadne appears as "Ariadna;" a pair of Chinese curtain hooks are marked "African head-dress," and a wooden stamp for the sacred loaf of the Greek Church is stated to be a "Greek butter-print." One large room is devoted to casts of classical statuary, all remarkably poor and badly put together. In the centre of this hall is a marble replica of the "Dying Gaul," which must have cost a vast sum for freight alone. Such a jumble of old newspapers, books, historical relics, glass, pottery, arms and old clothes can scarcely be imagined outside of a curiosity shop.

Judge Wickersham's loan collection of Indian baskets is the only thing of real interest in all this curious medley. Here, as elsewhere among the local collections on the coast, I found a collection from the Philippines, the loot of churches and residences, mixed with battle-flags, military relics and insignificant objects of native manufacture. The returning soldiers bring back these things, including crucifixes, vestments, and small images of the saints with ivory heads and hands. The latter are sometimes highly artistic, and the pose of the figures, dressed in silk and gold embroidery, admirable.

Tacoma is a most beautiful city, and the view from the hotel porch overlooking the bay, is beautiful in the extreme. We left Tacoma at 8 p. m. for Seattle on the "Flyer" a little passenger steamer, that makes the run of thirty-three miles in ninety minutes. We stood on deck and watched the snow-covered peaks of the Cascade Range lighted by the setting sun almost directly before us.

From Seattle, Dr. Dorsey and I made a trip to the Makah Indians at Neah Bay on the Straits of Fuca near Cape Flattery. The Makah belong to the Wakashan family and number about four hundred souls. Their reservation occupies an area of thirty-six miles along the straits, and is the residence of two other tribes, the Quile-ute and its sub-tribe, the Hoh, of the Chimakuan stock.

The Makah have four settlements: at Neah Bay, Ozett, Suez and Waatch. The village of Neah Bay has a population of 360, according to the last published report. Our knowledge of

the Makah is chiefly derived from a paper by Judge James G. Swan, "The Indians of Cape Flattery," *Smithsonian Contributions to Knowledge*, 220.* This valuable monograph, with numerous illustrations, contains a vocabulary of the language. Its author lived at Port Townsend and had a long and intimate acquaintance with all the Indians of this coast. He made large and valuable collections of ethnological objects from the Makah for the United States National Museum, and more recently collected for the Field Columbian Museum at Chicago. We had looked to meeting him, but his death occurred in the spring, shortly before our visit.

The trip from Seattle to Neah Bay occupies some twenty hours. A small freight and passenger steamer leaves Seattle every other day at midnight and arrives at Neah Bay, after numerous stops along the straits for freight and passengers, on the following evening. The steamer anchors, the passengers and mails are sent ashore in canoes, and, after receiving her return freight, she goes back the same night to Seattle.

We took passage on the *Alice Gertrude* on Sunday evening to awaken the next morning at Port Townsend, whence we proceeded westward through the straits. The monotony of the day voyage was broken by a chance encounter with an intelligent young Makah Indian, returning home from Seattle, where he had gone on business. He gave me the names and descriptions of the native games, and much interesting information concerning the present condition of the Indians. We arrived at the village of Neah Bay while it was still light and were taken ashore by an Indian in a dug-out canoe, one of a numerous fleet that was drawn up on the sand.

The first impressions were novel and striking. A gentle rain was falling. Ravens were flapping idly about. The houses, built for the most part of large unpainted slabs, were clustered at the extreme end of the crescent-shaped beach. On some of the flat roofs were scaffolds with fish hung out like clothes to dry. A tall pole, with several flags and streamers, marked a graveyard on the hill beyond the village. Assisted by an obliging escort of natives we clambered up the slippery logs that constituted the principal street of the village and were

* Washington, 1868.



PLATE 39. The Beach at Neah Bay, Washington.

guided to the Hotel Classet, where we proposed to live during our visit. The hotel is a modern house, one of the few in the village, with the name conspicuously painted on the gable end. It had one principal room, furnished with two beds, which we occupied. The native proprietor spoke but little English. He was an admirable cook, however, and three times each day would put on a long white apron and summon us to an excellent meal, which he prepared with his own hands in a little lean-to adjacent to the guest chamber.

Our time being short, we at once engaged as interpreter, the Indian, Charlie Williams, whom we met on the steamer, and started on our collecting trip among the houses.

Everything in the village centres around the fishing industry. Halibut is the principal source of revenue, and in every house we saw hanging the cedar-bark tackle bags filled with wooden and bone hooks, and the carved wooden club used in killing the fish. Swan describes the lines used in halibut fishing as made from the stems of the giant kelp, but now ordinary lines have been substituted. The bait is the cuttlefish, which is taken by means of two long sticks, one barbed, which are thrust under the rocks at low water. The fishing canoes are made from cedar logs which are roughly hewn out in the forest, and then taken home to be finished at leisure. We saw a workman engaged in this process, smoothing down the canoe with a native adze with an iron blade, a slow and laborious method. We procured specimens of these adzes as well as a number of the ancient stone hammers and a set of the wooden wedges which are used in splitting firewood or making boards. The canoes terminate in a bird or animal head at the prow, and are charred on the outside. Native paddles, made of yew, of very graceful form, are still used. Swan states that they were procured by barter from the *Clyoquot*.

The entire fleet of the village went out for halibut on the second day of our visit, starting at four in the morning for the fishing banks. They returned early in the afternoon, laden with fish. The majority of the canoes were manned by several men. Immediately on their arrival, the fish were placed in piles on the beach out of reach of the tide, and the women came down, cut off their heads and removed the entrails. The fish were then washed and packed in large

wooden boxes for transportation by the expected steamer to the Seattle market. Sometimes, through stormy weather, the shipments are prevented, causing considerable loss. The heads are carried off for home consumption.

The catch on the day of our visit was about 1,000 fish, which is the general average. They are purchased at so much per head, according to size, or are shipped to commission houses in Seattle, where they bring two and a half cents per pound. A sharp competition exists between the Indian trader, Mr. Draper and the three native representatives of the Seattle firms. Among other fishing appliances we procured specimens of a lure, made with two feather-like vanes of cedar, weighted with lead, which the fisherman presses down into the water with the point of his spear. When released it rises to the surface with a rotary motion which attracts the fish.

Some of the houses were distinguished as the residences of whale fishermen by the presence of large floats, made of the skin of the hair seal, inflated and painted with native designs. Swan has described the method of capturing the whale with harpoons attached to their floats. The point of the harpoon is left in the whale and a number of buoys are thus fastened so that the carcass is made to float. A whale had been taken shortly before our visit, and in one of the large communal houses we saw the saddle of blubber suspended on a bar between two posts before a fireplace which Swan describes. The side posts were decorated with bands of shredded cedar bark, ornamented with bunches of split and serrated eagle feathers, and the eyes of the whale were hung at each end next to the blubber, which was covered with spots of down. Underneath was a long wooden dish to catch the oil. Swan relates that the harpoon and line with which the whale was caught were hung at each end of the pole, but these were absent. We were told that unless this custom was observed, the fishermen would never catch another whale.

I had procured a head-dress made of shredded cedar bark, and decorated with eagle feathers, precisely like the decorations used on the posts. This band, I was informed, was used in the "whale" dance.

The Makah were formerly engaged in sealing and owned two schooners, but these boats were seized some years since,



PLATE 40. Fishing Canoes, Neah Bay, Washington.

one by the United States and the other by the Canadian government, and they are now compelled to depend upon the halibut industry.

There are several deep caverns in the cliffs at Cape Flattery, where the seals congregate in the breeding season. Swan describes the Indians venturing in when it is calm as far as his canoe can be managed, and then with a torch in one hand, and a knife in the other, dashing into the water and wading or swimming to where the seals are lying on the sandy bottom at the remote end of the cave. The exploit is one attended with great danger.

I procured a torch of light wood such as is used on these excursions, and a carved seal club of great beauty, said to have been obtained some twenty years since from the Clayoquot.

Apart from their fisheries the Makah have abandoned most of their aboriginal industries and customs. They dress entirely in white men's clothes, and few old native articles of personal adornment survive among them. The women wear silver bracelets made by a native silversmith.

They show a considerable mixture of white blood. The children speak English, but the older people, of forty and upward, know only their own language and Chinook. The children are everywhere, as gay, light-hearted and amusing as Indian children generally. They followed us in troops through the village. The babies are tied in a board cradle, which replaced the bark cradle said to be formerly used. The latter are still employed for new-born children. Cradles are suspended from a bent sapling by cords tied at the four corners, the baby being rocked by giving a slight push to the bough.

The new houses, built on foreign designs, are bare and uninteresting and in marked contrast to the old communal dwellings, one of which, where we found the whale saddle, is still inhabited. These houses were occupied by a number of families, each of which built its fire on the earth floor, and slept on a low platform covered with reed mats on one side by the wall. The existing house is a dingy place, one huge room into which the daylight penetrates only through chinks and crevices. Each family had its individual belongings. On one

side was a row of whale bladders filled with whale oil. Above, at one end, were tiers of wooden telescope boxes containing dried fish. Small wooden kits of tools were everywhere scattered about. Large baskets of fresh halibut heads were on the floor. At one fire a woman was cooking muscles in an iron pot. These iron pots, ship's pots, were everywhere. Large Chinese jars of brown glazed earthenware were also common, as well as painted Chinese trunks, the latter being highly valued, and exported from China expressly for the Indian trade.

One old woman in the large house was weaving baskets, an industry which occupies many of the women. These baskets are manufactured from eel grass, plain white and dyed in different colors with aniline obtained from the trader. The common form is cylindrical with a woven cover. They are made for sale and find a ready market at the Indian curio stores in the cities. The tools employed are extremely simple: a disk of wood the size of the bottom of the basket as a pattern, a flat stone used as a hammer, and a bit of wood, with two metal blades close together, used to split the basketry material. We procured a great variety of mats and baskets made of cedar bark. Whaling tackle is kept in a large square flat bag of woven cedar bark. Burden baskets are made of spruce roots or cedar twigs, loosely woven and suspended by a band which passes over the forehead. These bands are worked in colored worsted in ornamental patterns. The cedar bark mats are of large size and are amazingly cheap and beautiful. I had the good fortune to procure a native blanket of what appears to be goats' hair, similar to the dog-hair blankets formerly made by this tribe.

One of my chief objects in visiting the Makah was to procure a set of the implements used in their native games. As everywhere among the Indians on this continent, these games are now seldom if ever played. At the first house we visited we found an old man who had a number of sets of the wooden disks used in the hiding game. We procured a number of these sets, and saw the Indian manipulate them under a bundle of shredded cedar bark. Elsewhere I procured two of the bones used in the hand game, and, from a local celebrity known as Queen Anne, a set of the beaver teeth dice, with their



PLATE 41. Unloading the Halibut, Neah Bay, Washington.

accompanying counters, small rib bones of the seal. The last is especially interesting in having with it the medicine used by its owner in securing success, a small package containing a dried fungus and a foetal beaver tooth.

The women play a kind of battledore and shuttlecock with thin wooden planchets and shuttlecocks of elder sticks with feathers inserted. These we had made for us, as well as shinny sticks and balls of whale bone. Charlie Williams exhibited to me the native cat's-cradle and explained the names of the figures. The Indians are also familiar with a game played with rings wrapped with braided cedar bark, which they roll and use as targets for arrows.* Ordinary arrows are used in this game, made of cedar, tipped with bone and feathered. Swan says that even in his day bows and arrows were used principally by boys and scarcely ever as weapons of defence, having been superseded by fire arms. We found a number of old yew bows in possession of the Indians, and secured specimens without difficulty. Wooden and horn spoons are still in use, and in an uninhabited house we found one of the old boxes that were used in cooking with heated stones. Next to appliances for fishing we were offered chiefly objects used in native dances, rattles, masks, head-dresses and the various ceremonial weapons that are carried by the performers. These dances have lost much of their original significance. They are performed as diversions, the Indians even going down to Seattle to dance for pay at local celebrations. Dance paraphernalia still exists in many of the Indian houses, and we purchased a number of masks and head-dresses.

During our sojourn in the village we encountered a number of interesting personalities. Charlie Williams, our interpreter, from whom we got much information, is a high type of educated Indian. He is a man of thirty-eight, but, with a perfectly smooth face, looks like a boy. He spoke and wrote English well, had a quiet, reserved manner, and seemed to have excellent ideas of business. In direct contrast with him was General Jackson, a squat old man with hideous visage,

* See *Games of the Makah Indians of Neah Bay*. By George A. Dorsey. The American Antiquarian and Oriental Journal. Vol. XXIII, No. 1, January and February, 1901, p. 69.

shabby clothes and bare feet, who preceded us from house to house, telling what we wanted. He had been a sailor and had traveled extensively, having no doubt been picked up by some passing ship, as was the old custom. Mr. Koboldy, our landlord, with his white apron, respectful manner and limited English, was a character in his way, as well as Queen Anne, who would have made a fitting consort for the General.

The Makah have an appreciation of the value of money, and our negotiations were conducted through the medium of United States silver dollars. They have had large sums in the past, and their earnings from the halibut fishery, if properly husbanded, would make them not only independent of government aid, but a well-to-do people. One feels that the chief duty of those who are responsible for their welfare is to discover and develop their native capacities, and make them self-supporting. The climate of Neah Bay is remarkable, the rainfall being the highest found anywhere within the limits of the United States. During all but the three summer months, it rains practically every day. The trader told us that the annual total was eleven feet, and the last annual report of the agent gives the rainfall at 107 inches for the year ending June, 1899, with 211 rainy days. He adds: "We don't need irrigation ditches."

The steamer "Alice Gertrude" returned on Tuesday evening. We were rowed out in a canoe with our boxes in the moonlight. Canoes, laden with boxes of fish, surrounded the steamer. We embarked, amid much noise and excitement, and, after a short delay, were sailing back to Seattle.

CHAPTER V.

VICTORIA AND VANCOUVER; WASHINGTON: YAKIMA;
OREGON: UMATILLA.

We stopped long enough in Seattle to inspect the shops and take a good look at the magnificent totem pole that adorns a small square in the centre of the business part of the city. This pole has been backed with wood and repainted. It is the most interesting public monument in Seattle. We found the streets near the river filled with a rough, turbulent crowd of men, gold seekers going out to Nome or returning from the Klondike. We were told that the great excitement was over and that the city had nearly resumed its normal condition. Returning to Tacoma, we made a parting call on Judge Wick-ersham, and took the night steamer "Victoria" for the city of Victoria, B. C. The quiet of this staid English town is in strong contrast to the unrest and excitement of the American city. Our first step was to call on Dr. C. F. Newcombe, an English physician, ardently interested in the ethnology of the coast, from whom we hoped to acquire a collection he had made during recent trips along the Sound. We found the doctor at his boat-house on the river, a stone's throw from his residence. He showed us a most interesting series of Kwakiutl masks, ceremonial objects and implements, which I subsequently acquired for the University. He had made numerous visits to the Kwakiutl, Haida and other tribes on his yacht and on English men-of-war, securing material for the Kew and other English museums, and more recently for Chicago. Dr. Newcombe subsequently obtained for me at Masset, the two totem poles which constitute the most substantial results of my summer outing.

During the morning we visited the Provincial Museum in the Government Building, in every way the best museum I had seen west of Chicago. The collections are entirely confined to British Columbia and pertain to natural history and ethnology. Unlike most museums housed in public buildings, it is given a place upon the first floor. The cases, flat and

upright, are of dark natural wood. A preliminary catalogue, printed in 1898, gives a very complete list of the birds and mammals of British Columbia, those wanted to complete the collection being marked with an asterisk. In addition it has a visitor's guide and case list of the birds. The ethnographical material was chiefly collected by Mr. F. Jacobson, with not a few specimens by our friend, Dr. Newcombe. Like the other objects, it is admirably classified, displayed and labeled, and the descriptive catalogue is a model. Admission is free, and the museum is open daily, except Sundays, from nine to four.

After luncheon we strolled down to the river, passing the warehouse of the Chinese opium factory. Crossing the bridge we found three huge carved and painted posts of a Lku'ñgen Indian house, lying upon the ground, the house having been taken down. These posts, through the kind assistance of Dr. Newcombe, we succeeded in transferring to Chicago and Philadelphia. A large, old communal house was still standing, in which were two women sewing. On our way back we made the round of the curio shops and stopped to order a set of the beautiful photographs of Masset and other Indian villages along the coast, taken years ago by the photographer, Mr. A. H. Maynard. Early the next morning we left on the steamer "Islander" for Vancouver. The ride affords much beautiful scenery, and at one place the steamer passes through a narrow channel where the water boils in fury.

The city of Vancouver, despite its great harbor and the fleet at anchor, offered us little temptation to prolong our visit. As a matter of sentiment I made a few purchases at the store of the Hudson's Bay Company. A chance encounter with Dr. Franz Boas lightened the tedium of our stay, and at 9.30 the next morning we returned by train to Seattle and Tacoma.

We parted at Tacoma for the third time, Dorsey to visit the Wasco and Nez Percé, in Idaho, and I to proceed alone to the Yakima agency, in Washington, and the Umatilla, in Oregon. My destination was Topinish, a station on the Yakima reservation. There is no town, only a few scattered houses on the great level prairie, covered with sage bush, and lying



PLATE 42. Black Cloud, Cayuse, Umatilla Reservation, Oregon.

Photograph by Lee Morehouse.

between the mountains. A number of Topinish Indians live near the station and I visited their houses on the afternoon of my arrival. At the first stopping place I found an intelligent Indian making a drum for use in the approaching Fourth of July festival. He had covered a wash-boiler with a green hide, which he was painting in the brightest colors. He showed me his dance costume at his house. It seemed to be made up of things purchased from other tribes. There were a quill-work hair ornament and war-bonnet that might have been Arapaho. Another war-bonnet, trimmed with ermine and eagles' feathers, which he said he had traded for a race-horse worth \$150, looked as if it had been made by the Piute or Bannock. I purchased two round tambourine drums from this man, finding them in a dance-house, a large oblong frame building near his home. This home contained no furniture and consisted of a single room, with mats spread on the ground about the sides, leaving a bare space in the centre. The drums were the only other objects in the building. The Topinish Indians dress in citizens' clothes, except blankets and moccasins, the latter being worn by the women and possibly half the men. The men generally wear their hair done up in two long rolls hanging down over their shoulders, the older ones letting it flow loose.

The land on this reservation has been allotted, and much has been leased and fenced in by white farmers. With irrigation it is very fertile. The lessees pay fifty cents per acre for the first four years and afterward one dollar per acre for the fifth year, the leases having five years to run. A company at Topinish has about one thousand acres leased this year. I was told it cost them \$6 this, the first year, to fence, plow and put in seed. The result of the system is to introduce numbers of whites upon the reservation, they occupying many of the properties near Topinish.

The Indian houses are very bare of things of Indian manufacture. Flat twined grass bags, wrought with colored worsted in native designs, were common, and here and there I saw wooden mortars and the long stone pestles used with them.

A large proportion of these Indians speak English. They are extremely independent in manner in their relations with the whites. The women seem less industrious than those of many

other tribes, and the men, as a class, appear to do nothing at all but ride on their ponies and gamble. The season of my visit, just before the great festival of the Fourth of July, may have had its influence. Quickly exhausting the resources of Topinish, I started early on the following morning to ride over to the Yakima agency at Fort Simcoe, thirty-five miles from the railroad. Mount Adams was clearly visible, rising, snow-covered, in great majesty above the mountains behind the fort. The top of Mount Ranier was also to be seen on the right. The road to the fort was almost perfectly level, broken only by a slight ridge midway.

The Yakima reservation covers 927 square miles, and has an Indian population of 2,309, made up of Klikatat, Pälus, Topinish, and Yakima (Shahaptian) and Wasco (Chinookan). They receive no aid from the government, supporting themselves, by civilized pursuits.

It was past two o'clock when I reached the fort. A company of Indian boys from the school were bathing in a pond near the school buildings. The trees were beautifully green, in marked contrast with the arid sage bush-covered plain I had just traversed. I was greatly interested in the old block-houses, pierced with portholes. No soldiers have been stationed here for many years, and the officers' quarters are occupied by the agent and employes of the school. The children in greater part had been taken away for the holiday by their parents, so that the number was greatly diminished. Those I saw looked well, happy and contented. The school houses are substantial, clean and apparently well administered. I was welcomed to the teachers' mess, where I had a cordial reception.

But it was the eve of the Fourth of July, and a guide and a pony were difficult to find. Fortunately an Indian named Jack Long, who came up to the school with a spare pony for his two little girls, gave me a mount and, getting a fresh horse, rode with me until dark to all the Indian houses around Simcoe. Except for the ride it was a most unprofitable journey. The Indians were mostly away. They were to have a basket party in the woods some five miles from the fort. We saw the flag-pole and the place where they were to assemble. Long was a Dalles Indian (Wasco) and his wife a Klikatat. On the road to Simcoe I saw and visited a mat-covered lodge, but the



PLATE 43. Jo Bennett and Owea, Cayuse, Umatilla Reservation, Oregon.

Photograph by Lee Morehouse.

Indians generally live in wooden houses. At many of these there was the framework of a wickiup, and at the majority a small tent, probably intended for ceremonial retirement. Long told me he had 1,040 acres (probably representing his family possessions), the greater part of which was fenced. He pointed with pride to his grain fields, and indeed much of the country immediately around Simcoe seemed most prosperous. The Indians were selling off their worthless ponies (this is the home of the cayuse) and improving their stock. Long told me of a recent sale of horses by an Indian to the canning factories at the rate of \$1,500 per thousand, delivered in Portland. "To be canned for the troops in the Philippines," he said, with a smile. I found the Indians near Simcoe were entirely abandoning their aboriginal customs. They were divided among themselves, not by tribes and families, but in accordance with the church to which they belonged, Methodist and Catholic, much in the same way as people in white communities. The report of the Commissioner of Indian Affairs (1900) gives a church membership of 450, with four churches on the reservation. Long told me, too, of native Indian churches, locally known as Pum Pum churches, where service was held on Sunday. The name would seem to be derived from their use of the drum or tom-tom. In the report of Mr. L. T. Erwin, the United States Indian Agent at Yakima, for 1897, he says: "In addition to their two churches (Methodist and Catholic) there are two large tipis known as the Pum Pum churches. I am not posted as to their creed or belief. They have an idea, however, of a benevolent and omnipotent deity. They represent him as assuming various shapes at pleasure, but generally that of an immense bird. He usually inhabits the sun, but occasionally wings his way through the aerial regions and sees all that is being done upon earth. Should anything displease him he vents his wrath in terrific storms and tempests, the lightning being the flashes of his eyes and the thunder the clapping of his wings. To propitiate his favor they offer him annual feasts of roots and salmon, the first fruits of the season. Aside from these two occasions, little attention is paid to the service. The attendance has been on the wane for several years, and before long I think the Pum Pum worship will be a thing of the past."

This Pum Pum religion originated with a native dreamer or prophet named Smohalla, and has been minutely described by Mr. James Mooney in his chapter on "The Smohalla Religion of the Columbia River," in his valuable work on "The Ghost Dance Religion." * Mr. Mooney states that the system is based on aboriginal mythology and usage, with an elaborate ritual, which combined with the genuine Indian features, much of what Smohalla had seen and remembered of Catholic ceremonial and military parade, with perhaps also some additions from Mormon forms. I conclude from Mr. Mooney's account that the dance hall I saw at Topinish was one of the churches of this sect, and that the two drums I purchased from it were employed in this peculiar worship.

I started on my return to Topinish on the morning of the Fourth of July. Visiting Long's house by the way, I purchased several of the flat twined bags, and he arranged to make me two sets of stick dice for the game which he called *pom-tal-i-wit*. This is the name applied to the beaver-teeth dice game and the sticks are used in precisely the same way. On the road we encountered numerous gaily-blanketed Indians riding to the "basket party" at Simcoe. They were intent on their merrymaking and hurried on without stopping. The Indian houses by the stream were all deserted. As we approached the station a heavy black cloud suddenly lowered over the mountains, just above the pass at North Yakima, through which the railroad enters the plain. On our arrival at the platform we learned that the train for which I was hurrying had been delayed by a washout. The cloud had burst in the pass a few moments before the arrival of the train. A farmer, drenched and disheveled, brought the news. A long wait followed. Indians, men and women, in holiday attire, would ride up and water their horses. They would sell nothing, nor even stop to exchange salutations. Fortunately the train arrived at last and I was off again to the next reservation marked on the itinerary. My destination was Pendleton, Oregon, my object being to visit the Umatilla. Stopping over night at Pasco, where I breakfasted at a restaurant kept by a Chinaman, most admi-

* Fourteenth Annual Report of the Bureau of Ethnology. Washington, 1896. p. 708.



PLATE 44. Ku-mas-sag, Cayuse. The Belle of the Umatilla Reservation, Oregon.
Photograph by Lee Morchouse.

nable of cooks, I spent the morning in an accommodation train that slowly made its way over the hills covered with ripening grain. The harvesters were at work with steam reapers and threshers, and thousands of sacks of wheat were piled in the fields. I arrived at Pendleton at mid-day. The town was gaily decorated with flags and banners. A long street, lined with shops, restaurants and saloons, was filled with a bustling, noisy throng: cowboys, Indians and prosperous, well-dressed, evidently well-to-do people, all hurrying along with an animation and energy that was infectious. Heavy teams, fine light wagons and horsemen blocked the roadway.

I learned that the Umatilla had celebrated the Fourth of July in a grove some five miles from the town, where they were still encamped. The Indians for some twenty miles up the river had assembled at this place. Their houses were deserted, so I could gain nothing by visiting them. At the same time I should find them all together and witness another interesting phase of Indian life, though with little hope of purchasing much material. I hastily procured a wagon and drove to the camp. On the way I stopped to visit the agent, Mr. Charles Wilkins, but found he had gone on to the celebration.

The Umatilla reservation has an area of about one hundred and twenty-four square miles and is occupied by three tribes, the Cayuse (Waiilatpuan?), the Umatilla and Walla Walla (Shahaptian), numbering 1,076, with 365 Cayuse, 183 Umatilla and 528 Walla Walla. A large portion of those called Cayuse, according to Mr. Mooney, are Umatilla mixed bloods. The agency buildings are frame structures, somewhat dilapidated, but charmingly situated near the Umatilla River. The old log stables, said to have cost vast sums, were pointed out to me as memorials of the way in which the government was robbed in the old days. The Umatilla Boarding School, a short distance from the agency, occupies handsome new brick buildings, which are well cared for and appear well adapted to their purpose.

The approach to the camp was screened by trees. Traversing a shady lane we found ourselves on the edge of a circle of large tipis arranged in a large oval space, with forest trees for a background. At the upper end of the oval was the long canvas

tipi of "Young Chief," chief of the Cayuse. In the centre of the open space was a large square pavilion, built on posts, covered with green boughs and sheltered on one side from the sun by young evergreen trees stuck in the ground. In addition to the large tipis there were a number of tents and smaller canvas-covered structures, outside the main circle, used like the large ones as dwellings for families. The ponies were tied to the trees behind the tipis. According to the estimate made in a Pendleton newspaper there were one thousand Indians present in the encampment. Five hundred was probably nearer the exact number. There were more than fifty large tipis in the circle, and some twenty smaller ones, and an estimate of eight persons to a tipi would not be excessive. There was one old buffalo hide tipi in the circle which I endeavored vainly to purchase. After concluding a sale the owner changed his mind and advanced the price, and subsequent negotiations were fruitless.

The Indians were generally good looking. The men were all in gala dress, wearing broad sombreros ornamented with feathers. They were wrapped in bright new blankets of very beautiful colors and patterns. These blankets, I afterwards learned, were made in a mill in Pendleton and sold to Indians throughout the country. The women were dressed in calico.

On my arrival at the camp, at about 2 p. m., many of the tipi doors were closed and the men asleep, stretched out on the ground, with their feet to the fire burning in the middle. There were two lemonade booths on the ground, where speculators from Pendleton, who had paid the Indians for the concession, were supplying refreshments both to the natives and their visitors. The latter, of both sexes, were prying into the tipis, lifting the doors, to the evident annoyance of the Indians. Later, I made the rounds. My reception was most cordial. The women all produced flat twined grass bags for sale, conical hats, moccasins and similar treasures. They kept their stores in painted parfleche cases, similar to those used by the Shoshoni, Bannock and Arapaho. The square flat bags are used as housewives, to hold combs, sewing material and bead-work. They were originally made of dyed grass, but the designs are now worked in colored worsteds, still in the old patterns, but far less beautiful in color. These bags have thong loops, by



PLATE 45. Mon-sa-poo, Ida Howlish-te-mona-ne (niece of Donald McKay), and Mrs. Little Hawk, Cayuse, Umatilla Reservation, Oregon.
Photograph by Lee Morehouse.

which they are hung from the saddle-bow. I saw many old buffalo hides, and in all the tents, suspended from the poles, quantities of dance paraphernalia, all practically identical with that used by the Shoshoni. Few if any native industries were being carried on in the camp. I observed only the flat bag-twining, which some of the women would take up from time to time as white women do fancy work. The women in general seemed to be taking their ease, seated around on the blankets and robes in the lodges, or engaged in domestic duties, visiting from tipi to tipi, or playing the "hand" game in the central pavilion. This was the only native game I saw played on the reservation. The women sat in two rows, facing each other, up and down one side of the lodge, the remaining space being occupied by groups of men playing cards and by spectators. The stakes, consisting of blankets, silk handkerchiefs, strings of glass beads and money in considerable amounts, were deposited in a pile between the rows. There were twelve women on each side. Four bones, about three inches long, two having a black band around the centre and two plain, were manipulated by one of the youngest and most vigorous of the women who occupied the centre on each side. The side holding the bones would sing and sway their arms and hands rhythmically in unison. The two sides sang different songs and not always the same one. The refrain was very pleasing. The younger players, smiling, with glittering teeth and flashing eyes, had a wild beauty I have not seen equaled. The object seemed to be to guess which player along the line had the bones, the opposite side leader indicating her choice by a sudden sideway motion of her hand. The counts were kept with twenty sticks, each side having ten, which were stuck in the ground in two rows before the principal player. All the participants bet on the result, and at the close of the game, one or the other side having gained the entire twenty sticks, the winner would divide the winnings according to the individual bets. The game seemed interminable, first one side winning and then the other, and throwing over one or more of the willow counting-sticks. The men card players used small sticks as counters.

As the sun declined the camp awakened. A mounted crier went the rounds and made an announcement. Sounds of drumming came from the big tent. Here and there I encountered a

man making his toilet, combing his hair and painting his body for the dance that was to take place in Young Chief's tipi. The performance commenced at about four o'clock. The women and other spectators sat around the sides on blankets and tulé mats, leaving the centre free. At one end a company of drummers pounded a big drum, at the same time singing, and thus regulating the dance. Upon their starting up one man would dance alone, followed after a time by others. The drum was of large size, nearly three feet in diameter, one head covered with hide painted red and the other yellow. The dancers were in part stripped and painted and in part fully dressed, wearing cloth jackets covered with beads and cloth and flannel leggings. Nearly all wore anklets of sleigh-bells and carried a variety of objects: one an eagle-wing fan, one a metal and another a wooden flute, an iron hatchet, a stick terminating in a bird's head, etc. In general, all the dance paraphernalia seemed to have been derived from the Bannock, Shoshoni or Arapaho, and indeed, in answer to my question, they told me the dances, or at least one of them, was a Shoshoni dance and had been purchased from that tribe. The dance continued while I remained at the camp, and I was informed the next day that it lasted all night. I was unable to discover that it differed from the Shoshoni dance I had witnessed at Washakie.

In many of the tents I saw old-fashioned Bannock women's saddles. Parties of Bannock frequently cross over to visit at this reservation. I met a Bannock man, and was told there were a woman and child with him. These Bannock are said to be extremely well-behaved and little given to drink. Drink is the curse of Indians on the Yakima reservation. They get it without difficulty from the saloons at Pendleton. The Indian lands having been divided in severalty, they became citizens so far as the purchase of whisky is concerned, and the laws against the traffic have become inoperative. I am told they are not enforced at present, the reason assigned being that the numerous arrests from time to time have proved a severe tax upon the county.

I made the usual inquiries about games, without much success, until I found a young Indian named Tom Crow, who was familiar with a hoop game and made me a set of implements, consisting of a flat wheel or hoop of willow twigs, tightly woven with willow bark, eleven inches in diameter, and poles



PLATE 46. We-nix (sister of Donald McKay) and Grandchildren, Umatilla Reservation, Oregon.
Photograph by Lee Morchouse.

or javelins, saplings some six feet in length. The players, say two on each side, face each other. One rolls the ring toward the other, who hurls his javelin at it. Another wheel game, which was also made for me, consisted of a small ring, wrapped with cloth, about four inches in diameter, having colored glass beads set around the interior. The ring was rolled and small darts, made of willow twigs painted red, tossed at it. The counts depend upon the particular beads touched or intersected by the dart. Tom Crow also made me a kind of cup and ball game of perforated salmon bones, which are swung on a cord and caught on a peg, similar to the salmon-bone game I had procured in Hupa Valley. The women formerly played shinny and made me sticks and balls. A small boy showed me a cat's-cradle, manipulating the string on one hand, with the aid of his teeth, in intricate figures.

I failed to meet Young Chief, at least to know him, but I called upon Peo, whose influence was formerly paramount in his tribe. Peo is a substantial, elderly man, with a fine, serious face. I found him seated in a chair in his tipi, the only chair I saw in the camp. His daughter, Sabina, was seated on a blanket, sewing. Peo told me he had just returned from Washington, and at a later interview said he had met Mr. Mooney there. I purchased from him the buckskin suit he wore on this journey. His daughter was a most attractive woman, with a low, cultivated voice and great charm of manner. Peo spoke what he called the Cayuse language, a Shahaptian tongue, in part identical with Nez Percé. I learned in his tipi that three or four very old persons upon the reservation still spoke, or rather knew, the original Cayuse.*

On my way to the camp, on the second day of my visit, I had the good fortune to find the agent, Mr. Wilkins, at home. He showed me a comparative vocabulary of Cayuse, Walla Walla and Umatilla which he had collected, with commendable zeal, from the Indians under his charge. At his suggestion I called upon the Rev. Mr. J. M. Cornelison, a Presbyterian clergyman, who was living in a tent, to be near his Indian charges, a short distance from the agency. He was very young, almost a

* Mr. Mooney informs me that the Cayuse classification has not received its final stamp, but will probably be decided for the Shahaptian.

boy, but had acquired the Nez Percé sufficiently to preach in that language and hoped in two years more to master it. He was greatly exercised over the degradation caused among the Indians by drink, and was endeavoring to find some way to combat it. He related many painful incidents of drunken Indians being frozen in winter and killed by trains on the railroad which traverses the reservation. He regarded the dances as very demoralizing, and had succeeded in weaning away the members of his congregation from them. I learned from various sources that the condition of the Indians, apart from drunkenness, was very good. Their lands, generally, are leased at from one to six dollars per acre, so that they all receive substantial incomes. It should be observed that the Indians have no power to alienate their allotments for a period of twenty-five years from the time of their division. I prolonged my stay at the camp until the last moment of time available. It was a gay and picturesque spectacle, and on the principal day of the celebration, when the Indians rode in a cavalcade, with their ponies painted, must have been most impressive. As I was leaving I encountered a band coming through the woods, driving their ponies to water, and in the moonlight I could almost fancy the old days had come again. At Pendleton I had the pleasure of meeting Mr. Lee Morehouse, an amateur photographer, whose pictures of the Cayuse twins are among the most popular of recent Indian photographs. He kindly gave me an opportunity to examine his prints, from which I selected a series, some of which are reproduced in the present volume.

Hastily packing my collections I took the train for Spokane, bound eastward, to cross the mountains and keep my appointment with Dr. Dorsey, in Montana.



PLATE 47. Umatilla Indian Girl, Umatilla Reservation, Oregon.

Photograph by Lee Morehouse.

CHAPTER VI.

MONTANA: FORT BELKNAP AND FORT PECK; NORTH DAKOTA: DEVIL'S LAKE.

It was a long journey from Pendleton, Oregon, to Harlem, Montana, with Spokane for the only stopping place, and at Harlem, where I expected to rejoin Dorsey, I experienced my first considerable disappointment. The Grosventre, whom we had hoped to find here, had broken up their summer camp and gone off to the mountains, and Dorsey, who preceded me, had followed them. I hired a horse and rode at once to the agency at Old Fort Belknap, on the Milk River, four miles from the station. There is no fort here, only a long row of white frame buildings, the residence of the agent and the government employees. The Fort Belknap reservation, with 840 square miles, has an Indian population of 1,297, pretty evenly divided between the Grosventre and the Assiniboin. The latter live along the Milk River adjacent to the fort. The Assiniboin are Siouan, but these Grosventre are Algonquians, being distinguished from the Siouan tribe of the same name at Fort Berthold, in North Dakota, by the title of "Grosventre of the Prairie." They are, in fact, an offshoot of the Arapaho, from whom they separated about a hundred years ago. In manners and customs they resemble this tribe. The objects which Dorsey collected among them for me can scarcely be distinguished from those we secured on the Wind River in Wyoming. The Grosventre live along the foothills of the Bear Paw Mountains, about forty-five miles from Harlem. While the principal agency for the Assiniboin is at Fort Belknap, the Grosventre have a sub-agency at the place above mentioned. The two tribes had encamped together about midway between their homes, and some twenty-five miles from Harlem, but this encampment had already dispersed.

I rode along the river, visiting the Assiniboin houses. They were substantial log structures, daubed with mud,

with clay floors, and bare of furniture. The majority were abandoned, but where the owners remained, I found them living in canvas tipis erected beside their cabins. At one of the houses an old man approached, carrying the carcass of a bird, evidently intended for his breakfast. On the earth floor of his cabin were two round stones, boulders, about eight inches in diameter, placed side by side and smeared with red paint. The Indian spoke no English and I had no interpreter, so that I was compelled to leave the stones unexplained. Further on I came to the principal settlement, where there were several cabins together, and a dance lodge. A single morning served for all that was possible without following Dorsey over to the mountains, and so, after calling to say good-bye at the agency, I returned to Harlem to take the train eastward for Fort Peck. On the platform at the station I met a young clergyman of the Episcopal Church, Mr. H. E. Robbins, the rector of the church in Harlem. This church was the single structure, other than the store, two wretched hotels and two equally wretched saloons, that was visible on the prairie. Mr. Robbins has established churches at which he officiates at Glasgow, Malta, Harlem, Fort Benton, Lewistown and Chinook, and his parish extends along the railroad for a distance of 132 miles. At luncheon on the train he related many interesting and characteristic anecdotes of the Indians among whom he is at work. At about four that afternoon I arrived at Fort Peck.

I had seen many tipis from the car window, long before we reached Poplar, the station, and at Wolf Point they were so numerous that it required much resolution not to stop off by the way.

The Fort Peck Reservation has an area of 2,775 square miles, with 1,753 Indians, composed, according to the official reports, of 619 Assiniboin and 1,134 Yankton. Both of these tribes are Siouan. The Assiniboin have a sub-agency at Wolf Point, twenty-one miles from Fort Peck, where I had seen their tipis. The Yankton are a subdivision of the great Dakota nation. Among them, at Fort Peck, are a few Santee, as well as Brulé and Hunkpapa Sioux, also Dakota. It should be observed that the word Sioux, a corruption of



PLATE 48. Wa-pa-lete-hi-hi, White Runner, Umatilla, Umatilla Reservation, Oregon.
Photograph (Copyright, 1900) by Lee Morehouse.

the Algonquian *nadowe-si-wag*, "the snake-like ones," "the enemies,"* is applied in a comprehensive or family sense to all the tribes speaking kindred dialects of a widespread language, and technically, is used to designate the linguistic stock, of which the Dakota is the principal subdivision. The Yankton at Fort Peck describe themselves as Dakota.

The fort, which was used as a military post down to 1893, is located on the Poplar River. I climbed the high bluff to the agency and found the usual collection of long white-washed frame buildings comprising the post-trader's store, the agent's office, the stables and station of the Indian police. In the rear, at some distance, were the new brick buildings of the government school, and beyond the low, one-storied stone barracks, arranged around the sides of a large square, of the abandoned post of Camp Poplar River. Indian policemen, distinguished by a metal star, were lounging on the benches in front of the store.

I made the usual inquiries for the agent, who was absent at Wolf Point; for an interpreter, and for lodgings during my stay. I learned that there was a hotel kept by a negro, but that visitors were sometimes accommodated in a vacant room in the old fort, and admitted to the employes' mess. As to an interpreter, I made a bargain with the chief of the Indian police, Mr. Joe Culbertson, to furnish a team early on the following day and conduct me over the reservation.

That night, after supper, in company with a half-breed from Washington, who occupied the position of physical instructor in the school, I visited a dance at a Yankton camp across the river some two miles from the post. My intelligent guide knew Charlie Williams at Neah Bay, and was well acquainted with the Indians along the Straits of Fuca. The dance was being held in a large wooden house, around which on every side were the portable canvas tipis of the participants. On the way we met a company of Indian boys, pupils of the school, stripped and bedaubed with red paint, engaged in a foot-race. The dance was described as a "grass dance."

*Indian Linguistic Families of America. By J. W. Powell. Seventh Annual Report of the Bureau of Ethnology. Page 111. Washington, 1891.

There were no other white people present. The dancers were mostly stripped and painted and wore the usual hair ornaments, girdles, arm and leg bands. Among other objects, they carried in their hands wisps of green grass. The men were seated in a row in the rear of the hall, and the squaws, dressed in calico wrappers, in a line opposite. At the moment the dancing was suspended and a kind of feast was in progress. Steaming bowls of what I was told was dog meat were being passed about and eaten with evident relish. After a time a company of drummers seated themselves around a big drum, the drumming and singing started up, and the dancers rose and capered in precisely the same way I had seen among the Shoshoni and the Umatilla. I seated myself on the edge of the circle but was sharply ordered back by one of the men. The dance was part of the midsummer merrymaking, and my presence was regarded as an intrusion and unwelcome. We returned in the starlight and bidding my guide good-night I sought my quarters. Night had wrought a strange transformation in the great square at the fort. I tried in vain to distinguish the door of the room that had been assigned to me. All the houses and doors looked alike, as much alike as the red bricks and marble steps of our Philadelphia streets. I tried one after another, all were closed and barred. No lights were visible. As I wandered across the vast court, my imagination was stirred and fancy peopled the post again with soldiers and scouts, sleeping on their arms, ready for the alarm of the midnight fray. Then the moon broke through the clouds, I found my room and slept dreamlessly until dawn. We started out early on our collecting tour. I quickly found that my interpreter, Culbertson, was a rare character. The son, by an Indian mother, of a pioneer named Culbertson, whose name is perpetuated in the local geography, he had served as a scout under General Miles in many of the fiercest battles on the frontier, and knew the country and the people as only such a man could. As judge of the Indian court and chief of the Indian police he commanded the fear and respect of all the Indians on the reservation, and was able to secure access for me to tipis, where, had I been alone, I should have met with refusal. On the way he told many stories of

the early days, stories of hard riding and fierce fighting, of midnight surprises, of scalping and all the horrors of the old Indian wars. Making due allowance for the spirit of exaggeration that characterized the country, I could not fail to be impressed with the evident truth and sincerity of his narrative. Keeping a sharp eye on his spirited horses, he seemed to be constantly on the lookout for everything visible on the great rolling prairie: smoke on the horizon, stray riders, everything unusual, his old instincts as a scout ever uppermost. At times our progress was interrupted by a detour to stop and question some strange Indian driving unbranded horses, for keeping a lookout for horse thieves was now the principal part of his professional duties. I questioned him about following a trail, bearing in mind the familiar stories, but he told me that they were in the main untrue. Our plunder consisted of beaded moccasins, women's work-bags, bows and arrows, and fine catlinite pipes with carved stems and quill covered pouches for Indian tobacco of willow bark and leaves of the bearberry. The prices were reasonable, for the Indians were very poor and wanted money. A traveling circus had visited Poplar at the time of the Fourth of July camp, and in spite of the excellent order preserved by Chief Culbertson and his assistants, had cleaned up pretty much all the ready money on the reservation.

As we crossed ridge after ridge, my attention was attracted by numerous long, unpainted wooden boxes, lying out in exposed places on the hillsides. They were Indian coffins. Approaching, we found where the lids had been removed, and their contents, bleached skeletons, still wearing rings and beaded ornaments, exposed to the weather. The Indians formerly exposed their dead in the trees, and on the banks of the river there was a low cottonwood with a funeral pack upheld in the branches. A colony of wood mice had made their nest in the bundle, and, startled, scampered away at my approach. The Indians do not visit their dead after the period of mourning is over, and even Culbertson, a man of iron, was indisposed to make a close inspection of these interesting relics. In recent years a graveyard has been consecrated near the agency, where interments are now made. At

the same time, the Indians cling tenaciously to their old customs in regard to the dead. On the second night of my visit I observed an old woman, tramping out into the prairie, screaming a wild chant, her voice full of the deepest agony. There was an aged woman dying in the house adjoining Culbertson's and she was singing the death-song. The next morning my guide left me to attend the funeral. The little cortege, the priest in his black robe leading, and the coffin carried by bearers presented a pathetic spectacle.

It was the custom formerly to gamble away the effects of the dead, playing for them at a game of plumstone dice, the so-called ghost-gamble. The Yankton also have another custom, that of "keeping a ghost," which is now strictly forbidden by the authorities. After a death, a near relative would take a lock of the deceased's hair and wrap it up in a blanket. Valuable objects of clothing, etc., would be added to the bundle, the person keeping it with him, as a mother her child. Finally there would be a dog-feast, and the contents of the bundle would be distributed. An old Indian who had recently performed the ceremony made for me four stakes called "ghost sticks," about four feet long and painted red, which are set up in a row in the ground to represent the ghost. Another interesting object which I purchased was a forked stick painted yellow, and with ends ornamented with quill work. This was used as a fork in the "grass-dance." A pot of dog meat is cooked, around which the dancers dance three times. At the third round one of them sticks the sharpened end of the fork in the pot. This procedure is followed until all are served. I was told on inquiry that dogs are highly prized for food, the sum of five dollars being sometimes demanded.

The most interesting character I met on the reservation was an old medicine man named Doctor Black Chicken. He was an Hunkpapa, a renegade from Sitting Bull's band, and had lived at Fort Peck for the last twenty-eight years. Doctor Black Chicken had a record as dark as his name and many were the crimes imputed to him. It was said that a white man whom he had scalped was still living. He had acted as an intermediary between the whites and the Indians in the



PLATE 49. Spotted Feather, Grosventre, Fort Belknap Reservation, Montana.

old days, now on one side, now on the other, and through natural cunning and shrewdness had preserved his life and freedom. He was living in a tipi adjoining his cabin across the river some distance from the fort. He was absent at the time of my visit and the cabin deserted. On the earth floor, at the foot of a post, were two round stones, painted red, precisely such as I had seen at Fort Belknap, with a large oval stone bearing a rude indication of a face, between. With these was a leg bone of a cow or buffalo, and above, hanging on the post, was a head-dress or bonnet made of horse skin, with ears and mane, and having horns attached at the sides. With this was a large brass bell, about the size and shape of a dinner bell. Culbertson explained that these were the magical implements and costume which the doctor employed in his ceremonies. When performing his incantations, he painted himself black, wearing only the head-dress. The doctor rode up at last, a spare old man, shabby and poor, noticeable only for his eyes, which were like those of a hunted animal. After some negotiation, the agent having recently prohibited the native medicine rites, I purchased the entire outfit, and obtained from the doctor an account of the names and uses. The large stone he called "Beats the Drum." When horses are stolen, the doctor made a tipi in his house under which he placed his drum with this stone. After a time the rock would beat the drum and reveal the thief and the location of the horses. When a person was very sick and his death anticipated, he painted the two smaller stones. These he called the "Large and Small Doctor." The bone was used to handle the heated rocks in the sweat house, and the buffalo horn as a cup to pour water on them.

Notwithstanding the bad reputation given him by the whites, Doctor Black Chicken proved to be by far the most intelligent, industrious and capable Indian I met on the reservation. He worked day and night during the remainder of my stay, manufacturing the implements used in the old games for our collection. In this way we secured two complete sets of the Dakota games, including the *haka* game, plumstone dice, whip tops, bone sliders, etc. The doctor was the recognized authority on old customs, and carried on a

lively trade in curios which he made for visitors at the post. I met another old doctor named Black Horn, a helpless cripple, who had been deserted by his wife and left alone in his tipi on the prairie. He sold me his rattle, a bulb of deer hide with a handle covered with the same piece of skin. It was painted on one side with red spots which he explained as the stars, and on the other with red and yellow stripes, which he said represented the Northern Lights. These rattles are employed to beat a tambourine drum, which differs from the ordinary drum in having both faces covered with hide.

I came to enjoy the prairie more and more with every day of my stay. While the sun shone intensely at midday, and the cold was keen at nightfall, the fine pure air blowing fresh from the north was ever stimulating and inspiring. And something was always happening, such as a prairie fire, when all the Indian police and, indeed, every available man on the reservation, were dispatched to put out the flames. The trader's store was the centre of life at the agency. Grizzled men, old timers, would come in from their distant ranches. They spoke the Siouan tongue, for many of them had Indian wives and families of half-breed children. And the trader and his clerks were most obliging, showing me the supplies that are kept in large assortment for the Indian trade. The different beads have their special names and uses. Thus the spotted glass beads are called "Crow beads;" they sell for twenty-five cents per 100. The long natural dentalia are known as Iroquois beads and bring from \$13.50 to \$17.00 per 1,000, depending on their length.

I called upon the Rev. E. J. Lindsay, the Presbyterian missionary, and learned from him that a new edition of "Rigg's Dictionary" was in preparation, and would shortly be published. From time to time I would receive a telegram from Dorsey, telling me that he was on his way. I was not sorry when he arrived at last. We had many experiences to exchange. He had gone to the Columbia River and visited the Wasco at the Dalles, and the Nez Percé on the Lemhi reservation in Idaho. I was not ready to go, but our plans demanded that we should hurry on. Our boxes were packed and shipped and we again started eastward. Just before



PLATE 50. Grosventres, Fort Belknap Reservation, Montana.

leaving I copied the following document, nailed to the door of the store, a document which throws many interesting sidelights upon the conditions existing upon at least one of our great Indian reservations:

ORDER.

FORT PECK AGENCY,
POPLAR, Montana, April 2, 1900.

The following practices are contrary to the regulations of the Department and *must cease*. Any person violating the same will be arrested and punished:

1. The keeping and giving away of a ghost.
2. The sheet dance.
3. The pow-wow and sorcery of medicine men.
4. The scalp dance.
5. Killing cattle for the dance.
6. The giving away of any issued goods in the dance.
7. Compelling persons to attend the dance by stealing or destroying their property or by other unlawful means.
8. Women are prohibited from dancing the singing dance (scalp dance) in connection with the grass dance.

The grass dance may be danced on the following dates: April 17, May 15, June 13, and upon no others, and the chief of each grass party will be held strictly accountable for the enforcement of the above order in relation to the grass dance. The police and all employees are instructed to forthwith arrest any one violating the above.

C. R. A. SCOBRY,
U. S. Indian Agent.

We reached the last reservation on our itinerary on the fifteenth of July. We had left the train at Minot at midnight with the intention of crossing over to Fort Berthold, but the uncertainty of securing transportation led us to resume our journey and we proceeded to Devil's Lake, where we arrived on Sunday morning. There was a traveling circus being unloaded from the cars at the station, the same, no doubt, that we had heard of at Fort Peck, as well as a Chautauquan Assembly in progress on the banks of the lake adjacent to the reservation. A narrow-gauge railroad carried us to the assembly where we found a little steamer in readiness to take us across to the agency. Devil's Lake agency is relatively small in area, containing only 153½ square miles. It comprises two separate reservations, Fort Totten, which we visited, and Turtle Mountain, some one hundred miles distant. The latter is

inhabited by Chippewa. The Indians at Fort Totten are Dakota: Cut Head and Santee, Sisseton, Yankton and Wahpeton, with a few Assiniboin, and number 1,041. They are reported as drawing 70 per cent of their support from civilized pursuits. The captain of the little steamer told us a story of the lake, how it was haunted by the ghosts of Indians who had perished in some far-off tribal conflict. There was something strangely incongruous in the name, for a more beautiful and placid sheet I have never seen. Indeed, the Indians call it *Midi Wakan*, "Spirit Water," a not unusual Indian name for such bodies of water among the Sioux. One cannot but regret that the more correct translation should not have been applied to the lake as well as to the neighboring town.

We found an interpreter, a half-breed named Louis Myrick, and passed the day with him, going from house to house and tipi to tipi, over the beautiful rolling prairie. The land seemed to consist of a series of huge cup-shaped depressions, with here and there little mounds which Myrick said were graves from which the soldiers at the fort used to dig Indian remains. We secured the usual collection of pipes, horn spoons, dance bonnets and moccasins, eating our luncheon in the shadow of a tipi, whose owner and his wife made us coffee and shared the contents of our "air-tights" in return. At one lodge I tasted pemmican, powdered beef sweetened with sugar, a most palatable dish. Near the close of the day we visited the cabin of an old man, a relative of Myrick's whom Louis said was a member of the society known as the *Wakanwacipi*, literally "Spirit" or "Sacred Dance," a secret society analogous to, if not identical with, the *Mede'wiwin* of the Ojibwa. The old man was totally blind. Myrick said that he was the possessor of the ceremonial objects used by each member at the feast, but that no money would tempt him to part with them. After much solicitation he showed us two very beautifully carved bowls and a carved spoon, and later sold them to Dorsey for a round sum. I was fortunate in procuring from him an otter skin medicine sack, the badge of membership in the society. After further negotiation I also purchased a wooden plume box with a sliding lid, on the under side of which was carved a mnemonic record of songs employed in



PLATE 51. Grosventre Tipis, Bear Paw Mountains, Montana.

the society's ritual. These two objects were the most precious specimens which I collected on my journey. The box Myrick told me was made forty-eight years ago by his uncle, Powerful Cloud. He said that the society was rapidly becoming extinct, no new members being taken in. We returned across the lake at nightfall on the second day. The brass band, composed of boys from the Indian School, was playing in the Chautauquan grove. Crowds of young people were enjoying themselves among the trees. The circus had departed from Devil's Lake. We passed a wretched night in a wretched room in a miserable hotel, and on the morning of the second day following, we arrived in Chicago.

COLLECTIONS AND PUBLICATIONS.

AMERICA.

UNITED STATES.

Florida.—A pottery bowl, $9\frac{3}{4}$ inches in diameter at top, with incised scroll ornament, with a skull found beneath it, (22,181), has been presented by the collector, Mr. Clarence B. Moore. These remains are from an aboriginal cemetery near Point Washington, Choctawhatchee Bay, Washington County. The vessel was found inverted over the skull.

New Mexico.—The Zúñi Indian costume worn by Mr. Frank Hamilton Cushing in Zúñi as a member of the Order of Priests of the Bow has been deposited by Mrs. Cushing. This costume is that represented in the portrait of Mr. Cushing (22,180), painted from life by Mr. Thomas Eakins in 1895, deposited by the artist in the Museum.

The objects are as follows:

- 22,168. Knitted blue worsted shirt, with seams braided with red and yellow worsted cords.
- 22,169. Buckskin trousers, ornamented with silver buttons.
- 22,170. Buckskin leggings, with silver buttons.
- 22,171. Buckskin moccasins, with hide soles.
- 22,172. Worsted sash, red, with green and white lines, woven in symbolic patterns.
- 22,173. Woven red cotton garters.
- 22,174. Belt of eight silver bosses.
- 22,175. Buckskin shot pouch, ornamented with silver buttons and cut leather fringe.
- 22,176. Baldrick. Buckskin shoulder strap, ornamented with silver buttons and bosses, with silver priming horn and bearskin pouch with silver bosses.
- 22,177. Necklace of shell and turquoise beads.
- 22,178. Wrist guard, leather, with silver boss.



PLATE 52. Frank Hamilton Cushing.
From a Portrait by Mr. Thomas Eakins. Free Museum of Science and Art.

22,179. Insignia as Priest of the Bow. Crescent-shaped roll of buckskin, with cut leather fringe, and a serrated flint at each end, with braided leather strap. This is represented as hanging on the wall in the picture.

PERU.

A pair of silver earrings (22,140) of Indian manufacture, have been presented by Mr. Edward Starr.

Five silver toys (22,143-147), representing a horse, deer, goat, lion and cow, collected by Mr. Edward McCall some seventy years ago, have been presented by Mr. George McCall. These toys are of impure silver, from 2 inches to $4\frac{3}{4}$ inches in height, and were probably intended for the Nacimiento.

EUROPE.

A bronze statue of a "Girl at the Fountain" (22,142), after Pradier at Paris, has been presented by Mr. Charles Francis Gummey.

SPECIAL COLLECTIONS.

Fans.—Mrs. Joseph Drexel has made the following additions to her collection:

22,149. Mexico. Feather fan, with national arms and pictures of natives, executed in fine colored feathers.

22,153. China. Folding fan, with paper leaf. On one face Chinese scene, and the other, pastoral scene in European style. Sticks of silver filagree, gilded and enameled.

22,106. India. Marriage fan of cus grass, ornamented with velvet, silver spangles and embroidery and beetle wings, and with frill of crimson silk at edge and lacquered wooden handle.

22,155. Italy, eighteenth century. Folding fan, with Venice lace leaf and carved ivory sticks.

22,152. Italy, eighteenth century. Folding fan, with swan-skin leaf with print of scenery and love verses; reverse, cypher with crown. Carved ivory sticks.

22,154. Italy. Folding fan, *brisé*, with carved bone sticks, painted with flowers and pastoral scene.

22,150. Italy. Folding fan. Leaf of lace made at the school at Burano at Venice, and bearing the autograph of Her Majesty, Margherita of Savoy, Queen Dowager of Italy. Sticks of tortoise shell with guards inlaid with brilliants.

22,151. Italy. Folding fan, with paper leaf with painting in gouache: "Venice," by L. di Brazza. Carved sticks.

22,156. Flemish. Fan leaf. Painting on paper in gouache, mythological scene, Neptune and Venus by Hendrik van Lint (1630-1655).

Games.—Five lottery tickets for the Columbus Lottery of Genoa, 1893 (22,148), have been deposited by the Field Columbian Museum.

Five sheets of lottery tickets (22,139) from Porto Rico, 1870, have been presented by Professor Martin G. Brumbaugh.

A pack of American Indian souvenir playing cards (22,138) has been presented by Mr. A. C. Vrooman, of Pasadena, Cal.

An old painted and lacquered battledore, *hago ita* (22,107), from Kioto, Japan, has been presented by Mr. Armand de Potter.

A printed snake game, *Ormspelet* (22,141) from Stockholm, Sweden, has been presented by Mr. C. V. Hartman.

The following games have been obtained by purchase:

22,157. Bowl game; wooden bowl with six bone dice. Winnebago Indians, Wisconsin.

22,158. Deer-toe game. Winnebago Indians, Wisconsin.

22,159-60. Wooden ball, perforated with holes, and ball stick. Winnebago Indians.

22,161. Ball stick, Sac and Fox Indians, Iowa.

22,162. Ball stick, Ojibwa Indians.

Numismatics.—Ninety-nine French medals have been presented by Professor Maxwell Sommerville.

A set of United States fractional currency, act June 30, 1864, 50 c., 25 c., 10 c., has been presented by Mr. Charles C. Harrison.

LIBRARY.

The following are the most important acquisitions since the last issue of the BULLETIN:

Das Tonalamatl der Aubin'schen Sammlung. Eine altmexikanische Bilderhandschrift der Bibliothèque Nationale in Paris (Manuscripts Mexicaines Nr. 18-19). Auf Kosten Seiner Excellenz des Herzogs von Loubat herausgegeben. Mit Einleitung und Erläuterungen von Dr. Eduard Seler. Berlin, 1900.

Gift of the *Duc de Loubat*.

Les Pierres Figures à retouches intentionnelles à l'époque du creusement des vallées. Par A. Thieullen. Paris, 1900.

Gift of *the Author*.

Lutheri Catchismus Ofwersatt på American-Virginiske Språket, Stockholm, 1696. By Johan Campanius Holm. With engraved title page and cypher of Charles XI. on the cover.

Gift of *Mr. R. C. H. Brock*.

Ensayo Lexicográfico sobre la Lengua de Térraba. Por H. Pittier y C. Gagini. San José de Costa Rica, 1892.

Gift of *Mr. Mauro R. Fernandez*.

An Index to the Islands of the Pacific Ocean: a handbook to the chart on the walls of the Bernice Pauahi Bishop Museum of Polynesian Ethnology and Natural History. By William T. Brigham, A. M. Memoirs B. P. Bishop Museum, Vol. 1, No. 2. Honolulu, H. I., 1900.

Gift of the *B. P. Bishop Museum, Honolulu, H. I.*

Report of the Commissioner of Indian Affairs. Washington, D. C., 1900.

Gift of *the Commissioner*.

Th. à Kempis. De Imitatione Christi. Lugduni. Ex-Officina Elzeviriana, 1658.

Gift of *Miss Sadie Caroline Gribble*.

The following works on numismatics and heraldry have been deposited by Mr. Robert C. H. Brock:

Abkürzungen auf Münzen. Kritische Beurtheilung der 3. Auflage von Schlickeysen-Pallmann. Von Dr. Emil Bahrfeldt. Berlin, 1896.

Vade-Mecum del Raccoglitore di Monete Italiane. By G. Bazzi and M. Santoni. Camerino, 1886.

George Daniel Seyler's Historische Nachricht Wahrsagenden Muntzen oder Derselben Vorbedeutungen nebst ihren accuraten abrissen. Welcher wegen gleichheit der materie beygefüget ist Jo. Jacob Brackenhausen Kurtz-gefaszte nachricht von denen Wahrsagenden Bilder-Säulen oder Statuen. Frankfurt und Leipzig, 1733.

Einführung in die Münzkunde. Eine Anleitung für angehende und erfahrenere Münz-Sammler. Von Dr. Hans Brendicke. Band II der Bibliothek für Sammler. Berlin, 1889.

Weights, Measures and Money of all Nations. By F. W. Clarke, S. B. New York, 1894.

Table of Coins that were Not Issued by the United States Mint. By Edward Cogan. n. d.

Contributions to the study of Indo-Portuguese Numismatics. (Fasciculus IV.) By J. Gerson Da Cunha. Bombay, 1883.

Grundzüge der Münzkunde. Von Hermann Dannenberg. Leipzig, 1891.

Beschreibung der gangbaren Marokkanischen Gold Silber- und Kupfer-Münzen, nebst einem Anhang von einigen seltenen Münzen. Von Franz von Dombay. Wien, 1803.

Illustrated History of the United States Mint. Published by George G. Evans. Philadelphia, 1891.

Ein Verzeichniss von Griechischen falschen Münzen welche aus modernen Stempeln geprägt sind. Von Dr. Julius Friedlaender. Berlin, 1883.

Catalogue des Légendes des Monnaies Mérovingiennes. Par Guillemot, (Fils Ainé). La Rochelle, 1845.

Historia Numorum, a manual of Greek numismatics. By Barclay V. Head. Oxford, 1887.

M. Heinrich Bunting's Beschreibung und Berechnung aller Münzen, Maasz und Gewichte der Juden, Griechen und Römer. Umschrieben und mit Zusätzen herausgegeben. Von Joh. Chr. Hendel. Halle, 1806.

A Handbook of Greek and Roman Coins. By G. F. Hill, M. A. London, 1899.

Historia Numorum Contumeliosorum et Satyricorum. By Christ. Adolph. Klotz. Altenburg, 1765.

Remarques Historiques sur Les Medailles et Les Monnoyes. Par Jean David Koehler. Tome Premier. Berlin, 1750.

Nummi Singulares. Von Johann Christian Kundmann. Breslau und Leipzig, 1731.

Nummi Jubilæi. Von Johann Christian Kundmann. Breslau und Leipzig, 1735.

Medals by Giovanni Cavino, the "Paduan." By Richard Hoe Lawrence. New York, 1883.

Monnaies et Médailles. Par Fr. Lenormant. Paris. n. d.

American Tokens. By Lyman H. Low. New York, 1886.

The Coinage of the Popes. By Lyman H. Low. Boston, 1886.

Afbildninger af samtlige hidtil Kjendte Danske Mønter fra Tidsrummet 1241-1377. Af H. V. Mansfeld-Büllner. Kjøbenhavn, 1887.

Monnaies de Ferri IV de Lorraine restituées à Ferri III. Par F. Mazerolle. Bruxelles, 1888.

Gros Tournois et Deniers Parisis; frappés au xvi^e siècle. Par F. Mazerolle. Paris, 1888.

A Guide to Roman "First Brass" Coins. By Leopold A. D. Montague. Bury St. Edmund's. n. d.

The Metallurgy and Assaying of the Precious Metals used in Coinage. By Alexander E. Outerbridge, Jr. Philadelphia, 1877.

How to Detect Counterfeit Bank Notes; or, an Illustrated Treatise on the Detection of Counterfeit, Altered and Spurious Bank Notes, with Original Bank Note Plates and Designs, by Rawdon, Wright, Hatch and Edson, bank note engravers, of New York. By George Peyton, Exchange Broker. New York, 1856.

Coins of Arakan, of Pegu, and of Burma. (The International Numismata Orientalia.) By Lieutenant-General Sir Arthur P. Phayre. London, 1882.

An Historical Sketch of the Paper Money Issued by Pennsylvania. By H. P., Jr. Philadelphia, 1862.

Notes Upon the Coins and Medals Deposited by the Numismatic and Antiquarian Society of Philadelphia at Memorial Hall, Fairmount Park, Philadelphia. By Henry Phillips, Jr. And upon the Collection of Chinese Coins Belonging to the Museum. By Stewart Culin. Philadelphia, 1885.

Die Becker'schen Falschen Münzen. Von M. Pinder. Berlin, 1843.

Indian Coins. By E. J. Rapson. Strassburg, 1897.

Numismatisches Legenden-Lexicon. Von Wilhelm Rentzmann. Berlin, 1865.

Numismatisches Wappen-Lexicon. Von W. Rentzmann. with Index. 2 vols. Berlin, 1876.

Die Geschichte der deutschen Wappenbilder. Aus Ralf von Retberg's Nachlasse. Frankfurt a. M., 1888.

Catalogue d'une collection de Monnaies Seigneuriales. Published by Rollin and Feuardent. Paris, 1865.

Versuch einer Beschreibung der seit einigen Jahrhunderten geprägten Klippen oder Nothmünzen. Von J. P. C. Ruder. Halle, 1806.

Clavis Numismatica. Von G. V. Schmidt. Dresden und Leipzig. 1840.

The Coins of the Bible. Published by Scott & Co. New York, 1884.

Historische Nachricht von Wahrsagenden Müntzen, oder Derselben Vorbedeutungen nebst ihren accuraten Abrissen. Von George Daniel Seyler. Frankfurt und Leipzig, 1733.

Illustrated History of the United States Mint. Published by A. M. Smith. Philadelphia. n. d.

Die Becker'schen Falschen Münzstempel in Ausführlichen Verzeichnissen. Von A. von Steinbüchel. Wien, 1836.

Government Central Museum, Madras. Coins. Catalogue No. 1. Mysore. By Edgar Thurston. Madras, 1888.

History of the Coinage of the Territories of the East India Company in the Indian Peninsula; and Catalogue of the Coins in the Madras Museum. By Edgar Thurston. Madras, 1890.

Madras Government Museum. Coins. Catalogue No. 2. Roman, Indo-Portuguese and Ceylon. Second edition. By Edgar Thurston. Madras, 1894.

Hints for Coin Collectors. Coins of Southern India. By R. H. C. Tuffnell. New York, 1890.

Guide de l'amateur de Monnaies Polonaises. Par le Comte Joseph Tyszkiewicz. Posen, 1890.

Bilder aus der deutschen Vergangenheit. Die Kipper und Wipper im 30 jährigen Kriege. 1857.

Société Royale de Numismatique. Vingt-cinquième élection a la Présidence. Extraits des Procès-verbaux. Bruxelles, 1875.

Scott's Standard Coin Catalogue. Copper and Nickel. New York, 1893.

Scott's Standard Coin Catalogue. Silver and Gold. New York, 1893.

Scott's Standard Paper Money Catalogue. New York, 1894.

Scott's Catalogue of Coins, Medals and Tokens of Mexico and its States and Cities, Central American Republics and the West India Islands. New York, 1890.

The Autographical Counterfeit Detector. n. d.

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EXCHANGES.

An exchange of publications has been made with the following institutions (in addition to those already noted) since the last issue of the *BULLETIN* :

Anthropological Institute of Great Britain and Ireland.
London, England.

R. Accademia dei Lincei. Rome, Italy.

State Historical Society of Wisconsin. Madison, Wis.

The Open Court Publishing Company. Chicago, Ill.

**NEW MEMBERS OF THE DEPARTMENT OF
ARCHÆOLOGY.**

The following have been elected to membership in the Department of Archæology of the University of Pennsylvania since the last issue of the BULLETIN, and down to April 27, 1901:

Bonnell, Mr. George B.	Hagemans, Mr. Paul, Devon, Pa.
Braddock, Dr. Charles S., Jr., Haddonfield, N. J.	Moulton, Mrs. Byron P., Rose- mont, Pa.
Bricker, Dr. William H.	Mullins, Mr. Henry King
Butland, Mr. Winfield S.	
Cameron, Dr. J. L.	Sans, Mr. Antonio
Ely, Dr. Thomas C.	Sechler, Rev. John H.
	Smith, Mr. Robert D.
Fisher, Mr. Clarence	Starr, Mr. John F., Camden, N. J.
Foley, Mr. George H.	
	Wolff, Mr. Otto

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THE INDIANS OF CUBA.

BY STEWART CULIN.

Early in the spring of the present year (1901) I was informed that geologists in the service of the Pennsylvania Steel Company had encountered a tribe of wild Indians in the mountains of Eastern Cuba. The statements concerning them were of such a direct and circumstantial character that, the means for an expedition to Cuba being provided by a patron of the Museum, I determined to visit the island and investigate the story. Without delay, provided with letters to the representatives of the iron companies at Santiago, I sailed from New York on the 23d of May. On the steamer I had the good fortune to encounter Mr. Arthur H. Nield, an English gentleman residing on the island of Little Abaco in the Bahamas as manager of a large plantation. Mr. Nield had been the English resident at Pahang in the Malay peninsula, had traveled widely, and was enthusiastically interested in ethnological research. He told me that a story similar to the one that I had heard from Cuba was current in the Island of Little Abaco, it being related that in its unexplored fastnesses wild Indians, survivors of the original Lucayans, were still living in primitive savagery. They never ventured down to the plantations, and as far as could be learned, had never been seen by any white man. Mr. Nield also told me that there were several caves in Little Abaco containing deposits of human

bones. Some of them had been cleared out by Sir H. A. Blake when he was governor in the eighties. He promised to investigate the undisturbed caves, and said that one of the caves was said to contain an Indian rock-inscription.

On the morning of Monday, the 27th, the steamer slowed down, preparatory to anchoring off Nassau. As we lay in the offing, the island of New Providence stretched before us. Its one conspicuous feature, the new hotel, a large white building resembling a factory or a prison, over-shadowed the low houses and trees, and destroyed the beauty of the landscape. On the right was a hill, crowned by a stone fort. As the tender approached the wharf a motley company of negroes assembled to observe the arrivals. Conspicuous among them were the native policemen in white helmets, and women dexterously balancing bundles on their heads. Donkey wagons with minute donkeys harnessed in long shafts were waiting to transport merchandise. The revenues of the island are derived chiefly from the tariff, a duty of from 20 to 30 per cent being levied upon all manufactured and most crude articles. The custom-house formalities being satisfied, I found I had several hours in which to see the city.

Accompanied by Mr. Nield, I visited the sponge market, a long wharf covered by a shed, in which the sponges, arranged in lots, are spread out upon the ground. There are three kinds of commercial sponges, grass, velvet and wool, the latter being the best. They are sold at auction in the market by the lot, the price varying from 10 cents to \$1.80 per pound. In 1899, the value of the sponge exports was £84,000. Sponge fishing is carried on on shares, one-third of the net profits going to the ship and the remainder to the men. If the cruise is unprofitable the outfitter loses his advances. As a compensation for this he charges high profits, often as much as 100 per cent upon the prime cost. I met on the steamer a sponge outfitter, an American from Cape Cod, who told me he had lost considerable money in trying to catch and prepare the tripang, a giant sea slug, for Chinese trade. The Chinese carry on profitable tripang fisheries in Hawaii, but his

experiments so far had been unsuccessful, the tripang not being the right sort.

Leaving the market we walked up to the public square, pausing to observe the giant silk cotton tree, the most famous natural curiosity of Nassau. The public building, with a porch with tall white Corinthian columns, resembles one of the old manor-houses of our Southern states. There was, indeed, a large immigration of loyalists from the states after the Revolution, and the mace still used in the House of Assembly is said to have been one formerly used in the Assembly of South Carolina.

In the public library I found a small collection of local antiquities. The structure, a curious old octagonal building, was built for a jail, the cells being arranged like the points of a star, so that the keeper could observe his prisoners from his station in the centre. They are now filled with books, in bad condition from the combined effects of the borers and the moist sea air. The natural history specimens, in a case on the stairway, comprise three Lucayan skulls and some stone carvings; among the latter a small stone image or idol from the Bahamas which had been exhibited at the Columbian Exposition in Chicago in 1893. Subsequently we hired a carriage and drove to various places of interest near the town. Sending the vehicle ahead, we walked through the deep cut and up the stone steps known as the "Queen's Staircase." The history of this remarkable work, cut in the solid rock, is unknown, popular opinion regarding it as having been made as an approach to Fort Fincastle that crowns the summit of the hill. The formation is calcareous, very soft, and of a light cream color. In Nield's opinion, the stairway had really been a quarry, and workmen were engaged in sawing huge blocks for a new building at the time of our visit. Fort Fincastle, on the eminence, is a small stone structure, an open battery with pointed bastions, resembling a ship, an effect that is heightened by the halliards with flags flying, the fort being the station from which ships are signalled. The old iron guns are thrown from their carriages, having been dismantled at the time of the withdrawal of the troops in 1891.

We drove from the fort through the negro quarter with streets lined with small thatched cottages and gardens overgrown with flowers and orange and cocoanut trees. Here, on inquiring about negro customs, I learned that the African game of *wari* was still the popular amusement. Our driver, an intelligent negro, procured a *wari* board for me at one of the shops in this section. The board consists of a plank, about $8\frac{1}{2}$ inches wide by 27 inches long. One side has twelve hemispheric cavities in two parallel rows. The game is played with seeds (*Caesalpenia bonduc.*) called by the negroes *wari*, whence the name of the game. Three seeds are placed in each hole at the opening of the game, and a player wins when, in counting the seeds around, he drops a seed in a hole already containing one or two, thus making a total of either two or three. *Wari* was much played at the Nassau police station, and by the negroes generally for drinks and small treats. The only other native game I could hear of was called "eighty days." It is said to be played with small sticks, but I could not learn any other particulars. The negroes are addicted to gambling, and were much demoralized by lotteries. Stringent laws against the practice had recently been enacted by the local government.

Later, I wandered alone along the harbor front, looking at the shops and markets, where a great variety of tropical fruits, sapodillas, mangoes and sour-saps were exposed for sale. After breakfast with Nield on board his trim little yacht in the harbor, the warning whistle of the "Saratoga" sounded, and we weighed anchor amid a drenching tropical rain. We passed Salvador at eleven o'clock, cleared Fortune Island at one, and at three in the afternoon passed Castle Island light, the last seen of the Bahamas.

The next morning at daybreak we entered the harbor of Guantánamo. I went ashore to the little village of Caimanera in a launch, and rode in a little engine-car up to the city. The road traversed a meadow for some twenty miles, and, at intervals by the way, one could see ruined shelters built of stakes, the remains of Spanish guard-houses of the late war. A single land crab scrambled awkwardly from

the track. Snowy white ibis stood in the shallow waters, buzzards wheeled over the trees and small birds abounded. In the harbor I saw pelican fishing. Mr. Theodore Brooks welcomed me at Guantánamo, whence, with scarcely a glimpse of the town, I hurried back to catch the steamer in the harbor. On the way, Mr. Brooks told me how the river had risen some thirty feet from recent rains, and how the land crabs, once plentiful, had disappeared since the war, having been collected and eaten by the inhabitants of the town during the blockade.

As to the object of my visit, there were Indians living in the vicinity of Guantánamo. They had no tribal organization nor Indian customs, and retained nothing save the physical traits of their ancestors. They pursued the same vocations as the other people of the neighborhood, many of them being employed in unloading vessels in the harbor. Many of them were named Pérez. Mr. Brooks recalled to me a stout elderly man who boarded the steamer on our arrival. This person, a nearly full-blood Indian, he told me was an employé of the custom-house. I had already observed the Indian features of two of the stevedores working in the hold of the steamer. They were addressed as "Indio," the name by which the Indians are known.

In three hours we had passed the iron mines at Daquiri, and Siboney, where our troops landed, and after steaming another hour were rolling in the swells off the picturesque old brick fort that crowns the entrance of the harbor of Santiago. Rounding the point we entered the narrow channel. The hull of the Merrimac had just been blasted away, and our course was unimpeded until we anchored for the health officer off the city. Santiago is built on a hillside, so that every house seems visible from the harbor. The sky-blue painted walls with red roofs, and the Cathedral rising above all, are most picturesque. I met Mr. William Schumann, the German Consul and resident director of the Juragua Iron Company, to whom I had a letter, on the dock. Under his direction I drove to the "Casa Granda," the principal hotel, in the Plaza now known as the "Plaza de Ces-

pedes." The life of the city centres in this square, which is adorned with fountains and tropical plants. On one side is the Cathedral, and opposite the Palace, occupied as headquarters by our troops. Adjoining the hotel is the spacious building of the San Carlos, the Cuban club, while facing it is the Cosmopolitan Club and "La Venus" café, the scene of one of the episodes of Davis' charming story entitled "Soldiers of Fortune." The plaza is a favorite promenade in the evening, and twice a week a native band plays popular music under the electric lights. The houses in Santiago are low, one and two stories in height, built of bricks covered with stucco painted blue or yellow, and uniformly roofed with large Spanish tiles. Their most striking features are the large low windows, sometimes guarded by a cage-like wooden lattice, but generally protected with gracefully wrought iron grilles, with a deep seat in which the daughters of the house lounge, peering through the bars, until late in the night. Within one sees a large, barely furnished room, with two rows of rocking-chairs, placed vis-a-vis, in the centre. The rooms are more or less open and connected, so that one often catches a glimpse of the inner courtyard from the street. In the suburbs are wooden huts, painted blue, with iron bars at the windows. The shops are filled with German and American wares, with little or nothing of native manufacture except the plaited palm-leaf bags and baskets used for carrying fruits and vegetables.

Early on the morning following my arrival I called on Mr. Schumann. He told me that in 1875, Dr. Adolph Bastian, of Berlin, came to Santiago to study the native population. Mr. Schumann took him to El Caney, where it was reported a number of Indians were living. It was during the insurrection, and traveling was dangerous. The insurgents were in possession of El Caney. When Dr. Bastian arrived, he was armed with revolvers, but Mr. Schumann explained to him it was dangerous to venture armed into the country; that it was better to wear a white coat and put some cigars in one's pocket. They found the Indian settlement, and Dr. Bastian made a number of measurements. An Indian woman described



PLATE 53. José Almenares Argiello at El Caney.

a cave which was said to have been formerly an Indian habitation. Here Dr. Bastian found a terra-cotta cylinder which he said was a stamp for fabrics. On digging in the cave no relics were revealed. Since that time, in consequence of the war, many changes had taken place in the population, and whether the Indians remained at El Caney was most uncertain.

Before visiting the Indian village, with the hope of obtaining some definite information concerning these people, I called with Mr. Schumann upon the Archbishop of Santiago, Francisco Barnada. The Episcopal Palace in San Juan Nepomuceno has a large courtyard from which one ascends by an outside staircase to the second story. The Archbishop, an elderly man, with strongly marked features, robed in a purple cassock, and wearing a purple skull-cap, greeted us at the door of the audience room. He was unable to give us any information about the Indians. He addressed me a few words in English, and in reply to my inquiry, told me that all the old records of the Cathedral had been destroyed by borers, and that nothing survived older than thirty years. Early the next morning we drove over to El Caney. It was the day of the municipal election, and even at dawn, when I awoke, carriages filled with voters wearing the opposing colors, red and white, were being driven rapidly about the city.

The village of El Caney lies some five miles east of the city. On the way we passed the once beautiful villa, sadly wrecked during the last war, where Mr. Schumann had lived at the time of Dr. Bastian's visit. The town showed evidences of the recent conflict. The little church, its interior demolished, with altars thrown down and walls dented with bullets, was a sad enough spectacle. A group of rural guards was lounging in front of the police station, and a young girl held a naked baby on the porch of the adjoining house. We had no difficulty in securing the information we desired. There was one old Indian living in the village. He proved to be the man whom Dr. Bastian had particularly examined in 1873, and the only one whom he considered to be of pure blood. His name was José Almenares Argiello,

commonly known as Almenares. He was a spare old man with iron-gray hair, and thin gray hair on his chin. He was very hale and alert for his age, which he told me was 112 years. His father, he said, had died at the age of 108. He lived in a little cottage where he was born, that had been in his family for 200 years. In his youth there were many Indians in El Caney. They were a free people wearing the same dress as their neighbors, and talking Spanish. He knew nothing of the old language, and the only Indian word he could recall was *Bacanao* the name of a river. They made soap of piñon ashes and the fat of oxen. They smoked pipes which they made of burnt clay, with a bamboo reed stem. There were many wild hogs, and they also ate the native rat or hutia. They drank from gourds, *gueira*, and made spoons of cedar wood. Formerly only Indians were permitted to live in the town. They had four mayors, two for the town and two for the country. Almenares had been twice married, but had no children. I asked him what course he had taken to prolong his life. He replied none, that he was in the hands of God who had permitted him to live.

El Caney was one of the principal Indian towns in the old days, and the arms of the place bore the effigy of an Indian princess. Before the war these arms, painted on a rusty piece of tin, were to be seen above the town hall. I was informed that this had been carried away recently, probably by an American soldier. On my arrival at Santiago, I met at the Casa Granda two members of the U. S. Geological Survey, Mr. T. Wayland Vaughn and Mr. Arthur C. Spencer, who were engaged in making a preliminary survey of the island. Through their acquaintance with the people and the country, they greatly facilitated my work, and put me in touch with the United States military authorities. Among the latter, Lieutenant Henry C. Whitehead was most kind. He gave me an opportunity of inspecting the arsenal. The Spanish arms have been entirely removed, except a park of small Krupp guns with their ammunition. Some of the casemats were filled with the old guns turned in by the Culans when they surrendered their arms. The bones of a Spanish



PLATE 54. The Home of Almenares at El Caney.

sailor, found in a chair on the coast after the destruction of the fleet, are preserved here in an old chest. They were thought to be the remains of the Spanish Captain, but his family in Spain declined to receive them, having already buried his body in Madrid.

From Major L. C. Carr, U. S. V., in charge of the sanitary department of Santiago, I obtained some interesting information in regard to the disinfection of the city, and the measures that had been taken to destroy yellow fever. No case had occurred in this once pest-ridden city for the past twenty months.

After further inquiries at Santiago, I learned that the Indians who had given rise to the story of a wild tribe were probably those living at Yateras, some miles in the mountains, northeast of the city of Guantánamo. I accordingly returned to that place by steamer, where Mr. Theodore Brooks kindly provided me with a letter of introduction and procured a guide and horses to take me to the settlement. My destination was the coffee plantation of Bella Vista, belonging to a Mr. Begué. The Indians lived near by. Mr. Brooks assured me that Mr. Begué would not only entertain me, but would also show me the celebrated cave at Monte Lfano. I started off with my guide, a French-speaking negro, in the afternoon, going by train to Jamaica, where we mounted, and rode to the plantation. After leaving the plain, we took a mountain trail leading through luxuriant tropical verdure. As we climbed the hills, the Flamboyant (*Poinciana regia*), a great tree, crowned with flame-colored blossoms, bloomed on every side. As we neared Begué's we traversed old plantations of coffee, bananas and cacao, all overgrown with weeds and tropical plants. We arrived at seven, and were most cordially welcomed. The house at Bella Vista, a long wooden structure, is built on the hillside, with terraces upon which the coffee is dried, *secaderas*, ranged directly below. At one end is a large aviary and at the other a fountain. Beyond were the stables, with airy stalls well suited to the climate. While supper was being prepared, my host, from an upper window, pointed out the landscape. In the distance were the mountains; to the left stretched the long

bay of Guantánamo with the village of Caimanera at its entrance, while the plain was dotted with small towns and sugar estates: Guantánamo, Soledad, San Vicente, Jamaica, San Emilio, San Carlos, Santa Cecilia, Esperanza, Confluente and La Luisa. In the foreground to the left were beautiful hillsides, with palm trees, like white stakes, dotted over them. Here and there amid the green were the thatched huts of the laborers. The next morning I started with a farmer attached to Mr. Begué's estate to visit the Indians at Yateras. On the way we stopped at "*La Sorpresa*," the plantation of Señor Eugenio Ysalgué, who, living near the Indians, was expected to know something definite about them. Ysalgué was a Spanish Cuban. His grandfather had come originally from Mexico. He spoke a little English, some twenty American volunteers having been quartered upon him during the war. He described the Yateras Indians as lazy and unwilling to work, cultivating only little patches of corn in the mountains for their subsistence. They excelled only in the fearless way they hunted the wild hogs in the mountains, attacking and killing them with the machete. They were dirty in their habits and covered with fleas. They had forgotten all their old language, and their customs were identical with those of the Cubans living in the country. They had no religion and no form of marriage. They had but one wife, but were not faithful to their partners. They had no games or amusements peculiar to themselves, but were addicted to gambling with dice, *dados*, throwing two with their hands. Their principal amusement was dancing to the music of the rattle, *guayo* and guitar. Señor Ysalgué asserted that the Yateras Indians were not descended from the original inhabitants, who had all been killed off by the Spaniards, but from Indians from Santo Domingo who accompanied the Spanish soldiers to Cuba some sixty years ago. Some ten families were brought from Santo Domingo. They came voluntarily and not as slaves. They intermarried only among themselves, with the result that there were many deaf and dumb among them who were only able to communicate with each other by signs, although not lacking otherwise in intelligence. Their sign for corn, he



PLATE 55. Indians Playing Guayo and Guitar. Negro Guide on Left. Yateras.

said, was to rub with the hand; for water, to raise the hand to the mouth; for tobacco, to draw with the lips; for money, the extended hand with moving fingers. The Indians in La Gueira at present number some 200; in all Cuba, say 400. As the result of intermarriage, those in the same locality all bear the same family name. At Yateras, it is Rojas; in Santiago, Montoya; in Baracoa, Rojas; in Cobre, Largo; in Bayamo, Telles. At Tiguabos, the old Indian capital, three leagues from Soledad, the family name was Irsulas.

The Indians formerly made fire with flint and steel, and before that by rubbing a stick of hard upon one of soft wood. They once used bows and arrows, but these were now unknown. Leaving Ysalgué's, we rode over the hills to the Indian huts. They were the same shacks we had seen occupied by the negroes along the road and through this section; a framework of poles with a conical roof of palm branches, the sides covered with palm branches roughly fastened. The men and children stood in the doorways. On our dismounting, they shook hands all around, with the customary salutations, and politely offered us chairs in the hut, as is the custom of the country. They made no objection to my taking their pictures, and at one place the women and girls all put on shoes and stockings and arrayed themselves in white muslin dresses as a preparation for this ceremony. Their huts were very bare of furniture. Everywhere I found a tall wooden mortar with a long double-ended, wooden pestle, with which, at one house, a woman was pounding maize. Wooden hooks, for suspending small articles, hung from the ceiling. I purchased two spindles with whorls made from large seeds, and in another house a flat paddle used in washing clothes. We inquired about musical instruments, and at one house, where there were young and pretty girls, we found a pair of rattles, a *guayo* and a guitar. The Indians have black hair, light-brown complexions, and pleasing, regular features. Their families are large. In several houses we saw three generations. They wore the costumes of the country, many of the men being stripped to the waist and the children naked.

I walked that night with Mr. Begué in his beautiful garden on the hill above the villa. Here was a great tank filled with lilies, that supplied water by pipes to the buildings below. As we strolled through the bowers of scented jasmine, listening to the notes of the Cuban nightingale, Mr. Begué told me how the insurgents had levied contributions upon him during the war. These contributions, vast sums, for which he showed me receipts headed with the arms of the Republic of Cuba, were obtained under threats of fire and sword. Night after night the coffee plantations were wantonly burned, his being one of the few, if not the only one that escaped. That night he arranged for a trip to the caves at Líbano on the following morning.

We started at five, with two negro servants with mules laden with panniers containing provisions for breakfast and bundles of native wax candles to light our way. The road led upward, along the crest of beautifully rounded hills covered with tall luxuriant grass that is used as forage for cattle. Another turn and we came to the burned coffee plantation of San Fernando. Here on the crest of the hill, Mr. Begué told me there had been an encounter in 1875-6 between the Cuban and the Spanish troops, a Spanish major being killed. Dismounting he picked up from the trail a number of Mauser cartridges, finding one pile of nearly a dozen where a soldier had fired a volley. The trail led up and around until we came to the U. S. military telegraph to Sagua and the road of boulders, where, as we dismounted and led our horses, Mr. Begué told me the Spaniards carried their artillery on their march from Guantánamo to Sagua. Continuing along the crest of a limestone ridge, we again descended, finding a camping place in the woods at the mouth of the cave. Mr. Begué first took me to another adjacent cavern, the source of the Guaso River, which runs from this place to emerge again at a point some six miles nearer the station on the Guantánamo railroad called Cuatro Caminos. We then ascended the hill, our guides twisting the candles in pairs, and prepared to enter the principal cavern.

The cave was very beautiful; one chamber succeeded



PLATE 56. Indian Woman Pounding Maize, Yateras.

another, with pendent stalactites. The floor at the entrance consisted of hard clay. There was no guano and no visible animal life except snail-shells on the floor. These disappeared as we penetrated into the cave. Traversing a short distance we came to a break in the roof, where trees of considerable size were growing from the floor, and long roots hung pendent from the opening. Continuing, the floor became irregular and broken with shallow pools of water, one small chamber succeeding another, with narrow passages between. At every point we could see that the cave was the channel of a subterranean river, like the one that supplied the River Guaso. Continuing we came to another break, a small fissure or crack, extending directly across the roof, through which the sunlight streamed between the bright-green foliage. We arrived at last in a chamber in which was a tin tablet suspended from a stalagmite, inscribed with the names of visitors, among which was that of Mr. Begué, and the date 1889. The earliest date appended to a name in the cave was 1852. At a distance of 501 metres we came to a place where the main passage was closed, and one could only pass with difficulty. Here we turned back, and returning rapidly, in fifteen minutes reached the entrance. After breakfast under the trees I ascended the hill and at a short distance found another cave showing marks of recent occupancy. Mr. Begué told me the hills were full of caves, and on returning he showed me the entrances to two that were visible from the trail. I had hoped to find remains of Indians, but there was nothing, and the character of the caves was such as to make such discoveries unlikely, unless one should find an undisturbed burial cave or habitation.

While we were breakfasting, the rain began to fall, and the trail was so slippery and difficult that it required some three hours to reach Bellevue. I spent the afternoon walking in the plantation adjacent to the house, and at five the next morning mounted my mule to return. On the way I stopped for a moment at Ysalgué's. It was a ride of three hours from his plantation to Jamaica, where we took the train at '9.20. Jamaica is a collection of poor frame houses

painted blue, like all the town houses in this province, and has numerous stores and a well-equipped pharmacy. At Guantánamo, Mr. Theodore Brooks entertained me at dinner, and showed me many relics of the Spanish ships and a number of large shells fired from the American fleet. After dinner, he related anecdotes of the war. He told me that at the time of the blowing-up of the *Maine* the Spaniards were within three months of subduing the insurrection. The Spanish general at Guantánamo was anxious for the planters to start grinding cane. The insurgent leaders notified them that if they commenced to grind they would burn their plantations, which, it should be observed, were uniformly protected by a guard of Spanish soldiers. The Spanish general suggested that Mr. Brooks place himself in communication with the insurgents and obtain their permission to grind. He assented to the proposition, and volunteered to cross the Spanish lines and enter the insurgent camp. Provided with a pass, and accompanied by four companions, who started by different routes, they met at dawn at the Spanish fort at one of the gates and passed the Spanish outpost. Soon after they encountered the Cuban guards, among whom Mr. Brooks recognized his former employés. They were nearly naked and suffering intense misery from fever and hunger. Continuing on, past one guard after another, he reached at last the Cuban general. He was ill with fever and so surrounded and watched, that Mr. Brooks had great difficulty in seeing him alone. In spite of all efforts, General Perez refused to permit grinding, on the ground that he was ordered by his superiors to prevent any work in this district,—nevertheless four estates, Santa Maria, San Carlos, Santa Cecilia and Confluente, made their crops under protection of Spanish troops. A fine band, the band of Simancas, played daily in the plaza, and Guantánamo was never gayer. Many of the Cubans, who afterwards drew their \$75 when peace was declared, remained in the Spanish government employment even after the United States had declared war. The policy pursued by the hated Weyler was copied from the Cubans, and in his reprisals and enforced contributions he simply carried out the methods pursued by the insurgent leaders.



PLATE 57. The Forest from the Mouth of the Cave at Monte Libano.

I had the good fortune to meet Mr. Spencer at Guantánamo and returned with him by the steamer Benito Estenger to Santiago. At the "Casa Granda" I encountered an Italian engineer named Frank D. Pagliuchi in charge of the copper mines at El Cobre. Pagliuchi had served four years in the Cuban army with great distinction. He told me that at El Cobre there were cuttings like steps made by the Indians when they worked the mines in the eighteenth century. There were Indians still living there, and a cave which was known as "Las Cuevas de los Indios." In confirmation of my opinion that Cuban customs rested upon a substantial Indian substratum, he told me nearly all the Cuban plant names are Indian. The geographical names are largely drawn from the same source, while many of the common utensils, such as the mortar and pestle, are of Indian origin. Concerning the mortar he said there was a notion that coffee crushed in it tasted better than if ground. He also told me that the Cuban General Jesús Rabi was of Indian blood. I met also at the "Casa Granda" an American engineer, Mr. Knowlton, in the government service, who built the water-works at Guantánamo. He had made the trip to Monte Lóbano while engaged in damming the Guaso River at Cuatro Caminos. His guide had then told him that there had been two principal Indian settlements in that province, one at Holguin and the other between Yateras and Guantánamo. The Indians, from time to time, had brought placer gold in small quantities to the Spaniards. The latter made many efforts to find the source of the metal, but without success. In the latter part of the eighteenth century, they moved the Holguin Indians to Yateras, and the Yateras Indians to Holguin, thinking that the Yateras Indians, not knowing their new locality so well, would be more amenable and that they would be able to follow them. In this, however, they were again disappointed, and no more gold was brought by the Indians.

I made a visit to Cobre with Mr. Knowlton. The mines lie about twelve miles west of the city. As we crossed the city line we passed an old block fort, with overhanging bastions, one of those built by the Spaniards at the close of

the ten years' war. Nearly opposite, we saw the slaughter-house with a tablet on the wall marking the place where the Virginian prisoners were shot in 1873. Passing the Campo Santo we ascended the hills, a fine view of the city and bay, with the Morro in the distance, stretching before us. Crossing the mountains and following a road marked by a military telegraph line, the church of El Cobre, perched on a terrace on the mountain side, came in view. The town of Cobre, at the foot of the hill, is much dilapidated. There are few evidences of its former wealth, but along the walls of some of the houses I saw iron rings, which I was told were anciently used to secure the awnings fastened across the street, from house to house, at religious festivals.

We put our horses up at a fonda on one side of the ruined plaza. Just beyond was an old church with a chime of bells in the tower, one dating from the sixteenth century. I inspected the ruin with no little interest, for I was told the Cubans captured a troop of Spanish horse in this church and burned them alive. I picked up a Spanish Remington cartridge among the débris. Afterwards I learned the story was false.

We ascended the hill by the stone stairway up which the penitents used to climb on their hands and knees. Pilgrims came to El Cobre from all parts of the island. The young girls of Santiago still walk to Cobre on the saints' days and sometimes perform part of the journey on their knees. The new church, standing on a broad platform, is built of stucco, and is both picturesque and characteristic. I had heard so much of the vast wealth of El Cobre that I eagerly accepted the offer of the sacristan to show me the interior. In the old days the Virgin of Cobre owned coffee plantations and slaves, and had vast possessions. Her altar was overlaid with plate, and diamonds and other precious stones gleamed in her crown. We found all bare and disappointing. The old pictures were without merit, and the lanterns that hung from the roof were of ordinary Chinese manufacture—one bearing the sign of a Chinese shop in Havana. The Virgin was an ordinary doll with a dress of silver brocade and wearing a silver crown. She was inclosed



PLATE 58. Cave at Monte Libano. Source of Guaso River.

in a glass box which could be revolved upon a pedestal covered with silver. There were emeralds on her breast and large stones set around the base of the platform, but no other indications of the ornaments that had been attributed to her. I was told that after the American occupation the shrine was robbed, and the Virgin herself carried off. The thieves, one an American, were caught and deported, but the jewels were not recovered. In the sacristy there was a curious old wooden image of St. Jago, and, in the closet with the sacred vessels, a Chinese pewter altar-set, consisting of flower vases and incense burners, such as are commonly used upon the altar of the Chinese god of war. Back of the altar was an alcove filled with crutches and testimonials and photographs of persons who had been benefited. In the sacristy I saw an old framed list of the instruments which should be employed in the special services of Our Lady, but the only musical instrument in the church was a small cheap American parlor organ.

We crossed the platform, walking back to where we could overlook the old mines. El Cobre had been worked by Cornish miners, and the machinery, installed some sixty years ago, consisted of Watt engines, etc., such as they had used in England. The decline in the mines occurred before the ten years war, when the price of copper diminished. The railroad, owned by an independent corporation, assured of a monopoly, exacted an enormous tariff. But one day the mine shut down, and has not been worked until the present time. The railroad was burned during the war, the buildings destroyed, and the town reduced to its present condition.

I learned much about Santiago from Mr. Robert Mason, the English Consul. He told me that once the hills about the city were covered with coffee estates. They had been abandoned by their owners, who had removed to Guantánamo, where they had gone into sugar plantations. The abandonment of the coffee estates was the outcome of economic conditions, and not caused by the war. The value of an estate was estimated by the number of its slaves. Thus an estate of 300 slaves was estimated at \$300,000. The

liberation of the slaves had been a gradual affair. Cespedes, who had freed his slaves, had already mortgaged them. The acts of enfranchisement were gradual in their operation. First, the owner might not punish or correct his slave. This was a direct blow at the system. Slavery lingered on, and lasted down into the eighties.

There was little to detain me in Santiago. I visited the Museum and Library, where the Curator, Señor José Bofil, showed me every attention. This establishment is located in an old residence and has a monthly budget of \$150, of which \$50 is expended for rental. The lower floor is used as the museum, and the upper for books. One room is devoted to relics of the insurrection, among which is a fragment of the shirt of General Maceo taken from his body when it was reinterred, together with flags, machetes and other arms used by the insurgents. In another room are relics of the Spanish fleet, small objects from the vessels, and shells fired from the American ships.

The prehistoric collection was contained in a small case: four black stone celts, very pointed, from the caves at Guaso, presented by D. Ricardo Planas, some small fragments of pottery and a flat stone axe, carved on one side with a human face, from Jauco. The Curator told me a small stone image and another object had been sent to the Pan-American Exposition at Buffalo. The foregoing gives some idea of the rarity of prehistoric objects in Cuba.

One of the most interesting objects in the museum is a carved and painted wooden statue of St. Jago, which once stood in the plaza, as shown by an old colored print in the museum. Notable, too, are the regalia of King Congo, a crown of gilded tin, two painted drums of African type, two maces, and a kind of royal canopy with the arms of Spain and the legend, "Viva Rey Melchor" Cuba, Año 1877. In a case in the same room are the costumes, hats with flaxen wigs, velvet coats and silver maces, once carried by the two *Maceros* in civic processions. Among other relics of the old time is a trophy composed of pikes with lanterns formerly carried by the *serenos*, or night watchmen in Santiago. In the court was a fragment of the tombstone of

Velázquez, cut and reinscribed, and a curious old stone from the neighboring Church of San Francisco, carved with what appeared to be the arms of some old Spanish viceroy: a sun over a tower, two mythic birds and three quivers of arrows twice repeated, quartered within a circular shield. A native snake, a quail, an alligator, and Cuba's largest native mammal, a *hutia*, like a large rat, were kept alive in the courtyard. Señor Bofil presented me with one of the old lanterns, and I endeavored to improve my opportunity to purchase antiquities in the shops about the city. Whatever may have existed had been gathered up by tourists who flocked to Cuba directly after the war, and save a few medals, given by King Alfonso to the volunteers in 1882, I found absolutely nothing for sale of antiquarian or historical interest. There are no book shops and no old books.

Unsuccessful in finding wild Indian tribes in the vicinity of Santiago, I first determined upon a journey overland from Guantánamo to Baracoa, led by reports of Indians in the intervening mountains. This journey, however, was said to be so difficult, that I concluded to go to Baracoa by sea, and thence inland to Cape Maisi. I accordingly sailed from Santiago on the steamer "Mortero" on the 14th of June. We dropped anchor in the harbor of Baracoa the next morning at five o'clock. I was amazed and delighted with the beauty of the tropical scenery, the shores, fringed with cocoanut trees, being especially beautiful.

The bay of Baracoa is one of the most picturesque in Cuba, but it is not a safe harbor like Santiago and Havana, being exposed to northeasterly gales. The town is the oldest in the island, having been founded by Diego Velázquez in 1512, the seat of the government having been transferred to Santiago in 1522. It lies high on the hill of coral rock on the east side of the bay. On landing, I went directly to the office of the military commander, Lieut. John W. Wright, U. S. A., to whom I had a letter from Lieut. Whitehead. I received a most cordial reception. Lieut. Wright was in thorough sympathy with the object of my visit, and at once ordered

that a rural guard be placed at my service as a guide during my stay. Wright not only occupied the position of military commander, but at the same time acted as Collector of Customs and Commander of the Port, as well as filling other offices too numerous to mention, representing the authority of the United States, not only over the town of Baracoa, but eastward across the vast region to Cape Maisi.

The town consists chiefly of a long street, at the head of which is a small unfinished church facing a meagre plaza in which is a melancholy fountain. I put up at the "Hotel El Siglo XX," something of a misnomer, judged by our American standard, facing the square. In the same street, surmounted with a clock which strikes the hours, is the *ayuntamiento* or city hall, in which I was told there were valuable records dating back to the sixteenth century. Our troops, some ten men of the Tenth Cavalry, occupy the barracks in the picturesque Spanish fort that crowns the hill above the town. Among the other defences of Baracoa is a small ancient open battery on the point, La Punta, at the entrance to the harbor. One of the rooms in the old officers' quarters here is occupied as a barrack by the rural guard, but the place is otherwise deserted, and contains nothing save some old rusted picks and cannon-balls, and fragments of a small gun-carriage. The walls are much decayed, and I could not fail to observe that the masonry, built of coral rock, had disintegrated rapidly under the influence of the climate.

The Indian village is at Yara, about three miles from the town. Procuring a horse through the exertions of the commandant, I started off with the rural guard, an Indian named Juan Gainsa, on the following morning. We rode eastward past the battery, and, fording the river, ascended the hillside, up rough coral rocks through plantations of cocoanuts and bananas which stretch from the coral cliffs to the sea below. On the banks of the river we encountered women washing clothes. They were clad in a single tattered gown, and their children of both sexes, entirely naked, played around. At a spring, where my guide said the Indians procured water, we



PLATE 59. Indians at Yara. (Large admixture of Spanish blood.)



PLATE 60. Indian Washerwoman at Yara

saw another group whom I photographed. We soon reached the border of the Indian settlement and stopped for refreshment at a road-side canteen. A large tin-cup of rum was sold for five cents. The drink was poured in a glass, and passed from lip to lip, each taking a swallow. The men whom we passed, all "Indios," exchanged polite salutations, most of them shaking hands. On reaching a house, the guard ordered that all the Indians in the neighborhood should assemble at three o'clock in a house which he appointed.

In the meantime we continued on, past cocoanut trees laden with nuts, and plantations of bananas with huge bunches of green fruit that in another month would be ready for the market. Finally, at the top of a hill overlooking the sea we came to a cabin, the home of my guide's father and mother. The place was crowded. I was offered a chair and shook hands all around. Large bowls of freshly made coffee were brought, and upon my expressing a desire to taste the *Agua de coco*, one of the men went off to the woods and quickly returned with the green fruit. Cutting off the top of the nut with his machete, he handed it to me, a natural cup, filled with a cool refreshing beverage. Another brought a basket of beautiful reddish-pink fruit with a large external seed, called *marañón*. The soft pulp contained an agreeable acid juice, which I was told was beneficial for stomach troubles. Everywhere I was cautioned against the cocoanut liquor as provocative of *calentura*. On the way I had photographed an Indian boy, twenty-one years old, of light olive color, medium height and auburn hair, named Anico Reyes. One of the washerwomen told me her name was Alaya Reyes. At the home I was told that my guide's name was Juan Azahares. His father's name was Francisco Azahares, and his mother, Vicenta Gainsa. From this I inferred that the guard was commonly known by his mother's family name. His mother was of marked Indian type. Her grandmother, I was told, was a pure Indian named Gregoria Gilarte Rojas, who died at the age of 127. She had married a bad Indian, a bravo casique of Yara named Ricardo Rojas. Her mother's

name was Petronila Rojas, still living at the age of 85-90. Her father, Pedro Gainsa, died at 60. The grandmother of the Indians in this cabin, Maria Azahares, died at the age of 116. In general, it appears that descent was chiefly reckoned in the female line, but that the wife went to her husband's house. At a fourth home I was told that the Indian inhabitants of Partido Yara are comprised in three families, Gainsa, Azahares and Rojas, who are all intermarried. The Gainsas come from the Azahares and Rojas. They number some six or seven hundred people, living in seventy-five to one hundred houses. They are self-supporting, owning their homes, and cultivating their own ground. They complained of the heavy taxes levied upon them by the Spaniards as well as the fees exacted by the Church for the rites of baptism, marriage and burial. They are all nominally Catholics, there being a church at Jamal. At present I was told that the priest charges \$7.50 for marrying, \$9 for mass for the dead, and from \$1 to \$7, according to the means of the godfather, for baptizing a child. From later information, I am inclined to believe the rates are overstated. The children attend school, where instruction is given in Spanish. At the house of the guard's father was a penciled sign, "Escuela del Carmen," and I saw some tattered elementary Spanish school-books.

Upon interrogating the people here, the only Indian word they could at first remember was *casavite*,¹ a large flat bread, made from a big dark root, the casava, which is sold in the town. Later, the guard's father recalled Yumuri, which he said meant "I am going to die." Asking them about the dog, they said he may have descended from the native dog. The Indian name for dog is *can*.² They used to make a fermented drink called *chicha*³ from parched corn flour and bananas, upon which they got drunk. They made canoes, *cainoa*,⁴ from big heavy logs which they

¹ *Casavite*, the diminutive of *casabe*, which Pichardo explains as a round thin cake made of a kind of arrowroot. These cakes are sold in the country markets.

² In old Spanish, *can*.

³ *Chicha*, Indian word from Panama for an agreeable fermented drink made from corn. Pichardo.

⁴ *Curnoa* = *canoa*, Cuban Indian word.



PLATE 61. Indians at Yara. The Family of Juan Calusa.

hollowed out by burning and by means of a stone adze, *miicara*.⁵ The tips of their arrows were also once made of stone, *vayate*.⁶ They made fire by rubbing two sticks, one called *purio*,⁷ and the other *majagua*.⁸ For lights they had candles of bee's wax, *cera bojia*.⁹ Their clothes consisted of dried leaves and feathers. They also made vessels of clay, which they called *buren*.¹⁰ The house, *bojio*,¹¹ had a roof, *cobija* (Sp.), covered with *guano*.¹² The floor was swept with a broom of palm, *escoba* (Sp.) or *coba*. For fishing they used a line of *majagua*. I subsequently purchased at the canteen a fish-net, *chinchorro* (Sp.), made of twine, *merlin* (Sp.), imported from Havana. Singing birds are confined in cages, *güin*,¹³ made of the *Caña Brava*. Baskets, *canasta* (Sp.) are made of *macusei*,¹⁴ and a woven basket is called *java* (Sp.). Among the names of animals, they told me the buzzard was called *aura* (Sp.); the land crab which they eat, *cangrejo* (Sp.), and the snail shells of different bright colors, *babosa* (Sp.). Two mortars are used, both made of *jocuma*¹⁵ wood. One a large mortar, *pilon* (Sp.), which is held with the legs and feet, in which coffee is crushed, and a small mortar, *mortero* (Sp.), used for pounding garlic, etc., in the kitchen. At the third house I visited, where there was a very pretty girl with a light, nearly white, complexion, I purchased a native *tres* (Sp.), with six strings, the body being cut from a single piece of cedar. The guide procured me here another stringed instrument, similar, also with six strings, called *tiples* (Sp.). These instruments are played in connection with two rat-

⁵ *Micara*, a Spanish maritime word, and also applied to the stones on the surface of a piece of ground which render it valueless. Pichardo.

⁶ *Vayate*, an unidentified word, presumably Indian.

⁷ *Purio*, a very pretty tree, of which several varieties are mentioned. Pichardo.

⁸ *Majagua*, Cuban Indian word, the name of a common tree of many varieties. Pichardo.

⁹ *Cera bojia*,—*ce-ra* (Sp.) "wax," and *bojia*.

¹⁰ *Buren*, Cuban Indian word signifying the flat dish made of clay in which was placed another dish containing the food. Pichardo.

¹¹ *Bojio*, Cuban Indian word signifying any rustic habitation. Pichardo.

¹² *Guano*, Cuban Indian word meaning any kind of palm. Pichardo.

¹³ *Güin*, Cuban Indian word signifying the stalks of all the family of canes. Pichardo.

¹⁴ *Macusei*, Cuban Indian word for a kind of aerial root that depends from a species of *arum*. Pichardo.

¹⁵ *Jocuma*, Cuban Indian name of a tree of which there are many kinds. Pichardo.

bles, *maraca*,¹⁶ and the notched gourd, *guayo*.¹⁷ One of the men present declined at first to play on the *tres*, saying there had recently been a death there. When the deceased is over twenty-one years of age they abstain from music for the period of a year.

At the fourth house, the head of the family was Julián Gainsa, and his wife Narcisa Gainsa. The woman, of middle age, had strong fine features, and had put on a respectable black gown. This was the house where the Indians had been instructed to assemble. I made a number of pictures of the group, which comprised some twenty adults, with a number of young children. The latter varied greatly in color from light to medium dark. The guard called my attention to a marked peculiarity in the men, their serrated, pointed teeth. The women and some of the men chewed tobacco. They told me they were some relation to the Gainsa at Guantánamo. Among other things they explained to me that the old name for hammock was *hamaca*.¹⁸ They sleep in hammocks in their houses, in each house there being either one or two. The living house, where they sleep and where the cooking is done, is covered at the sides with palm leaves. In addition to this house, there is usually another, a large open shed, supported on posts, with a four-sided pyramidal roof. We stopped at the canteen on our way home. The guard treated, and the glass of rum passed repeatedly around, and one of the men sang a ballad, to the accompaniment of the *tres*, the *tiples* and the *guayo*, while a boy violently kept time with the rattles. The singer continued without cessation, and the Indians being deeply moved and excited by the music and the liberal potations, it was with difficulty I resumed my journey. When we reached the tidal river it had risen so that we were compelled to swim our horses. As we neared the town, my guide requested me to act as godfather for his child. Upon my accepting, he fixed that very evening

¹⁶ *Maraca*—*matraca* (Sp.). In Costa Rica, *maltraca*.

¹⁷ *Guayo*, Cuban Indian word, the name of the grater for grating arrowroot. Pichardo.

¹⁸ *Hamaca*, Cuban Indian word. Pichardo.



PLATE 62. Indian Children at Yara.

for the ceremony. He called for me at eight o'clock with a Spanish notary and we went over to the church. I was presented to the priest, an amiable, stout, ruddy-faced man, who wore a black gown over which he put a purple stole for the ceremony. The church was lighted by a single long candle, which the priest, having adjusted his stole, held in his hand to light his book. The babe, a boy of two years, was brought by his mother. After the notary had handed the priest a paper with the child's name, Antonio Gainsa, I was asked to put my hand upon his shoulder. Afterwards I held him over the font, he crying loudly, while the priest poured water over his head with a tin cup. At the close of the ceremony, I paid the fee, the amount requested being \$1. The priest then suggested that the father avail himself of the opportunity to legitimize his child. Feeling that he might be deterred by financial reasons, I suggested that I would defray the expense. My offer, however, was not accepted. Later I made the usual presents of cake and wine.

I accompanied the notary to the "Club Union" where the men of Baracoa assemble every evening for social converse. The president of the club, Señor Caña, told me that at Dos Brazos, between Yateras and Baracoa, some sixty miles from the latter place, there were a hundred families of Indians named Rojas and Ramirez. They were living under a casique named Juan Anguita. He encountered them while crossing the island in the Cuban service during the last war, and the chief gave him a stone axe which the Indians had preserved for many years. This axe he had presented to the museum in Santiago, it being the one which I saw in that collection. He told me these Indians speak old Spanish, but very badly. They resemble the Indians at Yateras, but the latter are more mixed and modified by contact with other people. They do not marry with outsiders. Sr. Caña further told me that at Boma, about three miles east along the coast from Baracoa, there was a cave with Indian remains which could be reached by an hour's sail. In this cave was a kind of altar constructed of stone.

That night I attended a baile at the club. The floor was sanded and the chairs placed about the walls of the principal salon. The music, strange and beautiful to my ears, was furnished by a negro band who played brass instruments, a large drum and the inevitable *guayo*. The dancers moved slowly about, without reversing, and with a peculiar motion of the hips. There is no society to speak of in Baracoa, and no set entertainments except very formal dinners and the bailes.

I was not long in securing a boatman to take me to Boma. He arrived one morning at 4.30 and we started off in the dark in a small sloop, ordinarily used to carry cocoanuts up the coast. As we weighed anchor, the lights on the craft in the harbor dotted the water like stars. Outside there was a faint light in the east, the coast looming up darkly, with clouds resting like soft white sheets upon the hills. The flush in the east turned a lively pink and at last the sun, partly obscured by clouds, rose out of the sea. Then the rain fell in torrents and I covered myself with a sail in the bottom of the boat until we reached Boma. We landed at the customary canteen, near the cocoanut warehouse, and finding a guide who knew the cave, ascended the hill to its entrance, a distance of about a mile. The mouth was located about three or four hundred feet up the cliff, the way lying over rough fragments of coral rock. It was very small and nearly round, and about three feet in diameter at the narrowest part. It opened directly into a spacious limestone chamber, with a roof covered with stalactites and a flat, even floor of red clay. Near the wall on one side of this apartment was a hole in the rock about two feet square, which looked as if it had been partly wrought by human hands. It was quite shallow, and almost filled with earth. Nearby was the fragment of a gourd cup, suggesting that the cavity had been used as a source of water. The chamber itself appeared to have been recently used as a shelter. At the rear, the floor ascended at an angle of about thirty degrees in smooth rounded terraces covered with bat guano for about 100 feet. At this point there was an abrupt descent, with an opening on

one side at the bottom. The walls were full of rounded fissures worn smooth by water, in which the boatman, my guide, and a small boy who accompanied us, looked in vain for human remains by the light of palm-leaf torches. In descending, on the right side just above the entrance chamber, was another basin, a rounded hole in the rock, about thirty inches in largest diameter, containing water. It appeared to me to be entirely natural, but my guide declared it to be the work of the Indians. He said they had penetrated a vast distance into the cave, but had no idea of its depth. Apart from the chamber at its mouth the cave was unsuited for a habitation, nor did the present means of access point to such a use.

We returned to the sloop, and pushing off, resumed our way, to visit another cave of which my boatman had knowledge, at Barigua, some miles down the coast.

Before landing, we passed a coral reef from the edge of which fan-shaped corals, projected above the surface, flapped idly in the water. The latter was wonderfully transparent, and had the same marvellous shades of green I had observed at Nassau.

Again finding a guide, we went back about a quarter of a mile to the face of the cliff, where, at a slight elevation above the cultivated low land, I found a kind of stone bench, partly overhung with rock. Its floor, resembling cave earth, was filled with fragments of human bone, mingled with snail-shells and the claws of land crabs. The place had not been disturbed, except recently by our guide. Using the machete as a trowel I excavated a quantity of bones and shells without reaching the bottom of the deposit or finding any trace of stone or artificial objects. At a short distance beyond there was a continuation of the same rocky bench, but destitute of any earth deposit. It was six o'clock when we returned to the boat and started homeward. There was no wind and we made little progress. The boatman, a tall fine-looking man with reddish-brown skin, told me his name was Artilano Bravo. His mother, Rosalia Bravo, was an Indian of Yara. The other sailor was also of Indian blood, but farther removed. I went

to sleep on a sail spread on the hatch, and was awakened to find the lights of Baracoa before us and the boat careening in a brisk wind. At eleven-thirty I arrived at the Club Union.

The one subject that is perpetually discussed in Cuba is politics. There are two parties in the island: the Nacionalistas, comprising the negroes, who stand for "Cuba Libre," and are bitterly opposed to annexation, and the Union Republicans, comprising the whites, among whom there are a certain number, including all those who own property, who, while not without more or less hostility to Americans, are in favor of annexation. There is no gratitude among any class towards the United States, and no realization of the relative wealth and power of the two countries. As an illustration of popular sentiment at Baracoa, the yacht "May" arrived at the time of the public meeting to protest against the Platt amendment. The three Americans in the town were invited on board for dinner, whereupon the report was quickly circulated that the yacht was an American man-of-war, and that the Americans had taken refuge on board of her to escape the wrath of the indignant people.

The local question uppermost in Cuba is an issue between the blacks and the whites. The Cuban soldiers were chiefly negroes. Now that the war is over, they naturally demand recognition of their services. This the whites are unwilling to grant, and are asserting their superiority and re-erecting fresh barriers between the races wherever it is possible. Owing to intermarriage, many white men have families of children who are considerably off-color. At Baracoa an effort is being made to exclude from the club the families of all members who are not of pure white blood. The club is the fashionable assembly at which the bailes are held. Again in Santiago, the San Carlos Club has just been entirely reorganized, with the avowed object of excluding the negro mistresses of certain of its members. Direct appeals are made to "men of color" to unite and support the Nationalist party in the defence of their rights. I am informed that the race statistics in the census of 1890 are most misleading, many white men with dark

families turning in their children as white. In general the people of all classes are extremely superstitious. In the country, when an adult dies, the house is usually abandoned, and sometimes it is burned. Many superstitious notions exist about the moon. The moon brings on spasms, and umbrellas are carried on moonlight nights, even in the plaza at Santiago, to ward off its evil rays. I prolonged my stay at Baracoa in order to accomplish the chief object of my visit to that port: the trip to Cape Maisi and the Pueblo Viejo. Mr. Charles J. Fry, the representative of the West India Trading Company at Baracoa, having volunteered to accompany me. In the interval I saw much of the life of the city. On the eve of San Juan, the 23d of June, we went as spectators to a baile at the negro club. The dancers in part were masked, and some wore tall peaked hats such as one sees in pictures of the Spanish Court of the thirteenth and fourteenth centuries. Another night we attended a circus, a travelling show that arrived one day by the steamer, and created the same social flutter that the opera might in a larger town. I learned too, more or less about the Indians. One Señor Emilio Roses, whom I met at the post office, informed me that he owned the cave at Cape Maisi. It had been inhabited until recently by a Cuban, but he found it too cold and abandoned it. All the Cuban remains had been removed, and now nothing was to be obtained. About the year 1883, a commission from Havana under Dr. de la Torre had thoroughly explored the caves and taken everything. In Señor Roses' opinion, the skulls found in the caves were those of Cubans, and he was not satisfied that the stone objects were the work of Indians. There were no Indians at Savana.

In spite of delay, the day of the expedition to Maisi arrived at last. We started early, Fry with his Cuban manager, Eugenio, and I with my rural guard, Juan Gainsa, all variously mounted on horses and mules and equipped with provisions for the journey. We pushed on rapidly to Jamal, about six miles from Mata, the station of the company of which Mr. Fry had charge. Jamal was formerly the seat of a fine large church which was destroyed

during the war. Service is now held in a hall constructed of palm leaves, the old bell being hung on posts outside. We arrived at Mata at eleven o'clock. The principal building consists of a long frame structure designed for the storage, preparation and drying of cocoanuts, which are shipped not only entire, but with the hulls removed, the dried flesh, *almendra* (Sp.), being in great demand by soap manufacturers as a source of coconut oil. Cocoanuts are classed as firsts and seconds. Nuts of the first quality should be four inches in diameter, but at present, through competition, those half an inch smaller are accepted. All the small and sprouted nuts are broken and made into *almendra*. The nuts are collected by small traders throughout the country and transported in panniers on pack mules to the warehouses. The price for firsts was then \$10 per 1,000. The warehouse contains a series of dryers in which the green pulp is placed on wire trays and relieved of its moisture, turning a dark-brown color in the process. Everywhere hereabout, I observed dead coconut trees, and was told they were afflicted with a blight which was spreading over this end of the island. It was supposed to be caused by a parasite. The tree would wither at the top and finally die. The blight has already killed many trees and threatens to destroy one of the staples of the province.

The writer has received the following letter in reply to his inquiry addressed to the Hon. Secretary of the Department of Agriculture:

WASHINGTON, D. C., December 28, 1901.

MR. STEWART CULIN,
University of Pennsylvania,
Philadelphia, Pa.

DEAR SIR:—Your letter of December 24th to the Hon. Secretary of Agriculture regarding the disease of coconut trees in Cuba has been referred to this office. The Department sent an entomologist to Cuba to look into the cause of the disease of palms characterized by the falling out of the terminal bud and the death of the tree as a result. It was supposed at first that this was due to some insect, but after a careful investigation of the trouble it was decided that the disease was not caused by insects, and the material was referred to this office. After examination we decided that the trouble was

probably due to the attack of a fungus, and while of course a mere theory, investigation is necessary. We feel reasonably certain that such an examination would confirm our preliminary report. We have recommended the immediate destruction of all diseased trees. This in any case would probably be the only practical remedy inasmuch as spraying would be out of the question.

Respectfully yours,
ALBERT F. WOODS,
Pathologist and Physiologist.

From Mata, we continued on to the Yumuri, where a ferryman swam our horses over, conveying us in boats. The Yumuri is a noble river, flowing into the sea through a deep gorge in the rock, the walls rising precipitously, on one side 300 feet, above the water. It is at this point the Indian girl, whose exclamation *Yo mori* "I die" ("I died"), gave the river its name, threw herself from the rock. Remounting, we started up this ascent, which is reached by a very rough and narrow road in a series of zigzags along the edge of the cliff. The neighborhood is thickly planted with bananas, which were formerly shipped from this point. An iron cable carried the bunches of fruit from far in the interior and then down an inclined plane to lighters, which loaded the ships out in the ocean. This apparatus, which cost a quarter of a million dollars, was burned during the war. With its destruction, the shipment of bananas was rendered very difficult, so that the trade was transferred from Baracoa to Jamaica, and has not returned to Cuba. The prosperity of Baracoa before the war depended on the banana trade. More champagne is said to have been imported there than to Havana, and the fine old residences, like the present custom-house, bear testimony to the former wealth of the city. Notwithstanding that no bananas are exported, the natives still continue to plant them, and we passed numerous patches where the land had been cleared by burning, and the young plants set out, often directly in crevices of the coral rock.

The practically deserted town of Savana Vieja lies on the top of the hill of Yumuri. The miserable houses are roofed with sheet-iron plates, and are dependent entirely upon rain-water, which is collected in large sheet-iron tanks.

Just at the crest of the hill is an embankment where the Cubans fortified the town against the Spaniards. Savana was deserted during the last war, its inhabitants retreating to the interior. The top of the hill is a great level table. The meagre soil, consisting of bright-red clay, rests directly upon the coral rock from which it is derived.

Our destination for the night was the coffee estate of Señor Lores, but stopping by the way we accepted the invitation of Señor Francisco Yglesias, to pass the night with him. His house, an ordinary Cuban shack, lay in a small clearing in the tropical forest. Here I saw growing some of the plants that furnish roots used for food: the *casavile*, a running vine; *ñame*,¹⁹ yam, a vine like the sweet potato, and the *malanga*.²⁰ We swung our hammocks in a vacant room, and at five in the morning, after the usual coffee, were on our way to the Cape. We soon arrived at the plantation of Señor Lores. The estate had a patriarchal air, complete and well equipped in every detail. Declining the proffered hospitality save the invariable coffee, we continued on to Maisi. The road descended slightly, and at Caña Guasimas, we passed an old graveyard in a hollow of the rocks, some of the fissures in the coral wall being used as tombs. In the foreground were small, dome-topped structures, covered with stucco, resembling Dutch ovens. We arrived at last at the edge of the table-land. A leafy plain stretched for a league below us, with the lighthouse at Maisi, and beyond, the ocean. The view was only surpassed by that of the sea from the hilltop at Yumuri. The trail descended abruptly and entered the straight road, the Camino Real, leading to the lighthouse. We reached the tower at twelve o'clock. It is a massive structure, built in 1843, 127.92 English feet in height, with a light of the second class. The keeper lives in a substantial stone building, surrounded by a high wall, with an internal courtyard within which is a cistern. The Spaniards kept a garrison of fifteen men here during the war. There are the

¹⁹ *Ñame*, Cubanized word from Africa, applied to several plants with edible roots. Pichardo.

²⁰ *Malanga*, Cubanized word from Africa, the name of a common plant with long leaves, which produces an edible root. Pichardo.

remains of a village at the Cape, built and inhabited during the same period. The celebrated River Maya enters the sea within a short distance of the light. It is represented by a dry bed of rough stones, the river ordinarily flowing underground. In the rainy season, however, it fills the surface channel. There is no harbor, but a landing can be made on the beach by means of small boats. Turtle fishing is practiced here as along the coast. In the lighthouse I saw the decoys, rudely carved duck-shaped floats, some two and a half feet in length. The turtles, attracted by curiosity, play about them and are turned over and caught. The shell is manufactured by a negro at Baracoa, who brings canes and combs on the steamers arriving in the port.

The view from the tower is wonderfully fine, the high terraces of the Gran Tierra de Maya stretching far away on the south. We procured guides to the cave, at Maisi, and started the next morning by starlight. After a long detour, riding some two or three hours in the woods, we reached a point where we dismounted and proceeded to the cavern on foot. It proved to be a fissure in the rock, a kind of pot-hole where the roof had given way, some fifteen feet in depth. I descended to the mouth of the cavern proper, while Fry, Gainsa and the guides penetrated some distance into the interior. They emerged after a time with quantities of long white stalactites broken from the roof, and reported there was no trace of bones or human occupancy. In a house near by, the children were playing with a human cranium and long bones, which they said came from a cave, with which, indeed, the entire country is honeycombed. On our way that morning we passed an old and curiously wrinkled man who said he knew of some skulls in a cave on the Yumuri River, agreeing to bring them to us at Savana. We continued on westward, the trail leading through a dense tropical forest, our guides leaving us after directing us to the Pueblo Viejo. We had ascended to the table-land and were at a point commanding a wide view of the sea when my attention was attracted by an embankment of gravel, lying parallel to the ocean. It was the place we sought. The embank-

ment, some twelve to fifteen feet wide at the base and ten feet in height, was 668 feet long. Continuing my observations and aided by Fry, I found that it formed a rectangular inclosure, with sides extending back to another ridge some 300 feet, its greatest length being in a line east and west. It was manifestly the work of human hands, the gravel having been brought from a distance. The interior of the square, which was planted with bananas, was bare of trees. Its soil was dark in color, quite unlike the reddish clay of the surrounding country, and mixed with fragments of coarse, reddish-black pottery. In it Fry found the largest piece, the handle of a bowl in the form of an animal head. On the ocean side a forest of large trees had been cut down and let fall in lines parallel to the embankment. This had been done, apparently, as a means of defence. They had been cut with iron axes, and although showing signs of age, had evidently been felled at a period long subsequent to the earthwork. There was a Cuban shack on the south side of the enclosure, where the women hospitably offered us coffee and gave us some fragments of pottery. They had no knowledge or tradition of the Indians who preceded them. An open shed, adjoining the house, was built directly on the embankment. At Caña Guasimas we resumed the road we had traversed the day before, and on our arrival at Savana, the old man was awaiting us, carrying a bag of skulls. He told me they came from a cave near the Cape and not from the Yumuri River.

We arrived at Savana Viejo at sunset and slowly descended to the Yumuri in the twilight. The tide was up, and we were compelled to take the trail along the hillside. I gave my mule free rein and he galloped on in the darkness, now traversing level stretches and then ascending the coral rocks to dizzy heights above the sea. At eleven o'clock we reached Mata. In spite of fatigue and the lateness of the hour, Fry, lured by the strains of music from across the water, dressed and went to a baile that was being held in one of the houses near the bay. The next morning before our return, a young Cuban boy constructed a model



PLATE 63. The Embankment of the Pueblo Viejo.

of a native musical instrument, the *tumbadera*,²¹ for my benefit. Digging a hole in the ground he staked over it a section of palm leaf about two feet square. A sapling was then bent with its end on a line with the centre of the hole. To this a cord was attached and secured through a hole in the leaf. The music was made by tapping the tense cord, which emitted a dull hollow sound, like a drum.

We rode home leisurely that morning, with many stops at roadside canteens, and arrived at Baracoa at twelve o'clock. My business at this place was now finished. From time to time the elder Gainsa had been bringing packs of rattles, gueiras, gourd bottles, and similar small wares, so that I had secured a representative collection of the objects used by the existing Indians of Cuba. Reviewing them carefully, I can see nothing among them that is not equally the property of the Cubans generally in the province of Santiago. The same is true of the Indian words, which were long since incorporated in the everyday speech of the people. My boxes packed, I engaged passage on the steamer "Julia" to Havana, with many cordial leavetakings of the kind friends I had made in Baracoa. Juan Gainsa, my guide, paid me a farewell call. I cannot speak too highly of his sterling fidelity in my service. A fine horseman, a good shot, a brave and courteous man, he won my respect and admiration, and I parted from him with regret.

The voyage to Havana was hot and uneventful. We arrived at Nuevitas on the morning after sailing, landing in a shore-boat for a glimpse of this rarely uninteresting town. Gibrara was the next stop, the steamer winding through the long narrow entrance to the harbor, to clear the same afternoon for an uninterrupted run to Havana. My fellow-passengers, a gay company of young Cubans, endured the tedious journey with patience. At night they played and sang Cuban airs in the cabin to the accompaniment of a tin *guayo*, which I bought for the purpose at Nuevitas. One, a mining engineer, educated at the Columbia School of Mines, related to

²¹ A rustic musical instrument with one string. Pichardo. In Costa Rica this instrument is called *tumbadera*; the Indian name is *quijongo*.

me many stories of the war. Although a Cuban by birth, he discussed the Cuban affairs with philosophic calmness, attributing to the Spaniards no greater measure of cruelty and bad faith than he did to the Cubans themselves. We sighted the Morro of Havana on the next day, and after a long delay at the wharf, landed directly on the dock. I rode to the Hotel Inglaterra, hunted up my friend, Mr. Spencer, and passed two days, until the sailing of the next Ward Line steamer, in examining the antiquities of the city.

The Americans have revolutionized Havana. No greater change has ever occurred peaceably in a modern city in the same short space of time. The finely paved streets, the beautiful parks, and the complete absence of filth and unpleasant smells, all testify to the superb energy and intelligence of the military commander. At the same time Havana has lost not a little of its old-time interest. The *volante* has entirely disappeared and the streets are said to be less picturesque. The old Arsenal is one of the few places that seems to have remained entirely untouched and undisturbed. Lieutenant-Colonel H. L. Scott, who was acting Governor during the illness of Major-General Wood, drove me entirely about the city and pointed out the notable monuments, especially the fragments of the old city wall which have been preserved in one of the new parks. After the surrender of the city, Colonel Scott found the old parchment archives in private hands, being used for wrapping parcels. They were carefully collected under his direction and are now carefully preserved in the Fuerza, the late Nestor Poncé de Leon being made their first custodian.

As everywhere in Cuba, the swarms of tourists have cleaned up the antiquity shops; and save a few medals and crucifixes, I found nothing worth purchasing. Not so the old book shops, which are numerous and interesting. They resemble the similar shops in Madrid. There is the same hopeless confusion, the same indifference on the part of the proprietor, and the same difficulties in consummating a purchase. Nevertheless, among other books of interest, I picked up the first forty volumes of the *Documentos Inéditos* for the trifling sum of ten dollars in Spanish silver. The currency of Havana still remained in a confused condition at the time of my visit. In

Santiago, everything is on the basis of American gold, but in Havana there are three currencies: Spanish silver, Spanish gold and United States currency, necessitating frequent visits to money changers, and elaborate calculations in making small purchases. I was especially interested in the Chinese colony in Havana. These people appeared less prosperous than in the United States and to have lost more of their characteristic dress and customs than the Chinese in our American cities. They form unions with negro women,—which are commonly sterile, so that the race is dying out without leaving any impression upon the population of the island.

My chief interest, however, was in the scientific life of the city. Through the kind offices of Dr. John Guiteras, I met several of the professors in the University. Under the guidance of Dr. Carlos de la Torre, I visited the University Museum and saw the interesting collections of the natural history of the island, made by Dr. Juan Gundlach and Dr. Filipe Poey, which are conserved there. The archaeological collections belonging to the Academy of Sciences were not visible, being stored during the construction of its new building. Dr. de la Torre had visited the same region covered by my trip, back in the eighties, and had had similar experiences. He had seen the venerable Almenares at El Caney and told me he had verified the date of his birth in the local records. He had had the same guide, Juan Gainsa, among the Indians at Jara, and had collected several skulls from the caves at Cape Maisi. Apropos of these he related that the Cubans had regarded them as the remains of patriots of the late war and given them Christian burial. Another professor in the University, Dr. Louis Montané, had paid much attention to the archaeology of the island. He had made extensive explorations of the caves, and among others had visited those at Mont Líbano. He showed me an interesting and valuable collection of Cuban archaeological objects at his home, as well as the illustrations for his long-promised work on the archaeology of Cuba, which was then ready for publication.

COLLECTIONS.

The following is a catalogue of the collections made by the author on the preceding trip:

NASSAU.

22,290. Board for *wari*, rectangular, $8\frac{1}{2}$ by 27 inches, with twelve holes in two rows; accompanied by seventy-nine seeds of the *Cisalpina bonduc*, used in the game.

CUBA.

22,291. *Violin*.—Cedar wood, with bow. Length, 19 inches. Yara. Fig. 31.

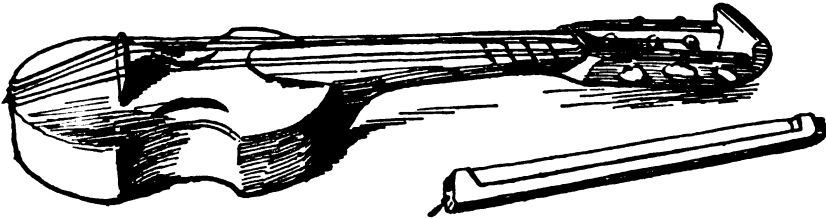


Fig. 31. *Violin*, 22,291. Length, 19 inches. Yara.

22,292. *Tiples*.—Small mandolin made of cedar wood, with six strings arranged in pairs. Length, 19 inches. Yara. Fig. 32.

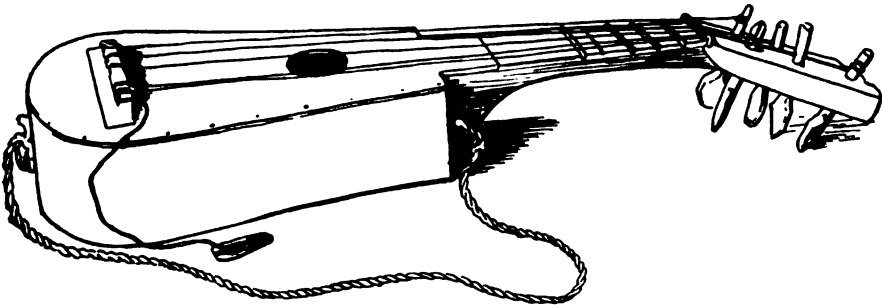


Fig. 32. *Tiples*, Mandolin, 22,292. Length, 19 inches. Yara.

22,293. *Tres*.—Guitar made of cedar wood, with six strings arranged in pairs. Length, $28\frac{1}{2}$ inches. Yateras. Fig. 33.

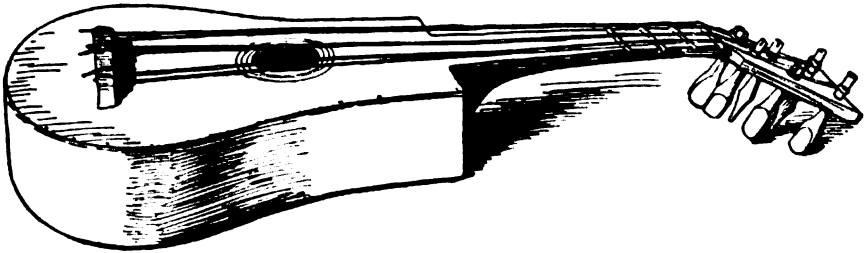


Fig. 33. *Tres*, Guitar, 22,293. Length, $28\frac{1}{2}$ inches. Yateras.

22,294. *Cuatro*.—Guitar made of cedar wood, with five strings, two of which are tuned alike. Length, 26 inches. Yara. Fig. 34.

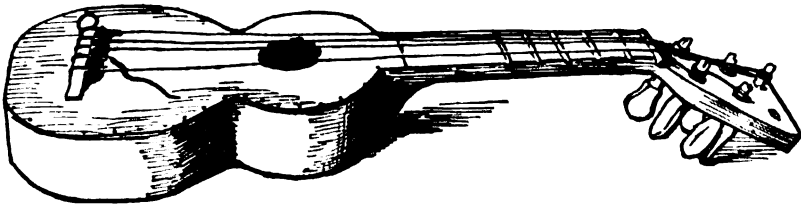


Fig. 34. *Cuatro*, Guitar, 22,294. Length, 26 inches. Yara.

22,295. *Guayo*.—Musical instrument made of a gourd, with wooden scraper. Length, $18\frac{1}{4}$ inches. Yateras. Fig. 35.

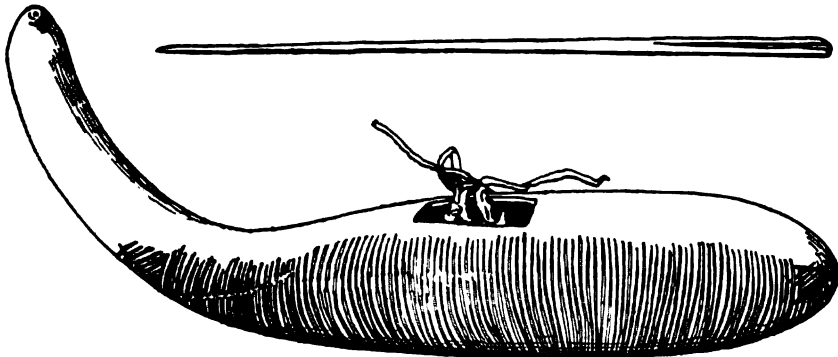


Fig. 35. *Guayo*, 22,295. Length, $18\frac{1}{4}$ inches. Yateras.

22,296. *Guayo*.—Made of a gourd. Length, $16\frac{1}{2}$ inches. Yara.

22,297. *Guayo*.—Made of a gourd. Length, 14 inches. Yara.

22,298. *Mamboo*²² ("bamboo").—A musical instrument like the *guayo*, made of a joint of cane, notched along one side, and cut with irregular holes. Length, 14½ inches. Yara.

22,299. *Guayo*.—Made of tin. End open and cut like a fish's mouth. Scraped with a wire. Length, 12½ inches. Purchased at Nuevitás.

22,300. *Maraca*.—Rattles (6), three pairs made of the fruit of the *gueira*,²³ with wooden handles. Yateras and Yara.

22,301. *Pilon*.—Mortar and pestle, of jocuma wood, used for grinding maize. Height, mortar, 16 inches. Length, pestle, 33½ inches. Yara.

22,302. *Mortero*.—Mortar and pestle, of jocuma wood, used for crushing coffee. Height, 10¼ inches. Length, pestle, 11½ inches. Yara.

22,303. *Paleta* (Sp.).—A paddle of hard wood, used in washing clothes. Length, 18¼ inches. Yateras.

22,304.—Spindles (2) used for spinning cotton, with whorls made of the seeds of the *Entada scandens*. Yateras.

22,305. *Jicara*.²⁴—Gourd water-vessels, tied with *yagua*.²⁵ Used for carrying water in the woods. Yara.

22,306. *Jicara*.—Gourd water-vessel. Yara.

22,307. *Chinchorro*.—Fish-net. Purchased at an Indian canteen at Yara.

22,308. *Jibe*.²⁶—Sieve, made of *guano*. Baracoa.

22,309. *Java* (*Petaca*, Sp.).—Carrying baskets (2), made of *yarey*,²⁷ with covers. Used in carrying country produce. Santiago.

22,310. *Java*.—Carrying basket, similar to preceding, but without cover. Baracoa.

22,311. *Porron*.—Water jars (2), of light clay. Imported from Spain. From Baracoa.

22,312. *Jutara*²⁷ de *Yagua*.—Sandals, made of bark of the *agua*, rudely plaited. Yara. Fig. 36.

²² *Gueira*, Cuban Indian word, the name of a tree and its fruit (*C. escentia cucurbitina*).

²³ *Jicara*, Cuban Indian word which Pichardo says may have come from Yucatan.

²⁴ *Yagua*, Cuban Indian word, the name of a forest tree. Pichardo.

²⁵ *Jibe*, Cuban Indian word meaning sieve. Pichardo.

²⁶ *Yarey*, Cuban Indian word for a species of palm. Pichardo.

²⁷ Cuban Indian word, not in Pichardo.

22,313. *Alpargatas*.—Canvas shoes with twine soles, commonly worn by laborers. Imported from Spain. Baracoa.

22,314.—Necklace of yellow glass beads and Job's-tears (*Coix lachryma*), with small metal cross. Worn by old Indian woman at Yateras.

22,315. *Poja*.²⁸—Seeds of *Entada scandens*, used as playthings by children. Yara.

22,316.—Seeds of *Cayajabo*,²⁹ used as playthings (marbles) by children. Yara.

22,317. Seeds of the *Ojo de buey*, used as playthings by children. Yara.



Fig. 36. *Jutara de Yagua*, Sandals, 22,312. Yara.

22,318. *Babosa*.—Large snail-shells, from Yara, used as playthings by children.

22,319. *Babosa*.—Snail-shells, from Yara, used as playthings by children.

22,320. *Babosa*.—Colored snail-shells, from Yara, used as playthings by children.

22,321. Wooden peg-top and cord (made in the United States). Indian children at Yara.

22,322. Bow. Rudely made of a bent sapling by Francisco Azahares. A model, and not practical.

22,323. Gum copal, used as a styptic by the Indians for wounds. Yateras.

²⁸ *Poja*. Cuban Indian word applied to the seeds of a climbing plant, very much like the *Ojo de buey*. Pichardo.

²⁹ *Cayajabo*, Cuban Indian name of the plant called in Spanish *mate*.

22,324. Fragments of human bones, and shells of snails and land crabs, from rock shelter at Barigua.

22,325. Indian skull, from cave near Cape Maisi.

22,326. Indian skull from cave near Cape Maisi.

22,327. Indian skull from cave near Cape Maisi.

22,328. Seven human femurs, and three small bones, from caves near Cape Maisi.

22,329. Fragments of dark red pottery, from the surface of the earthwork at Pueblo Viejo.

22,330. Copper ship-bolt. Length, 13 inches. From the wreck of the Spanish line-of-battle-ship "San Pablo"—at Santiago. She escaped from Trafalgar, and afterwards came to Havana under the name of Soberano. On a return voyage to Spain, she put in at Santiago leaking and never left the port. She was used for a long time as a guard-ship, and finally was abandoned and sunk sometime in the fifties. Afterwards she was set on fire and the upper works burned off. Gift of Mr. Louis Brooks.

22,331. Old English glass bottle for lime juice, from Guantánamo. Gift of Mr. Louis Brooks.

22,332. Mauser cartridges from the hillside at San Francisco, near Yateras.

22,333. Cartridge from old church at El Cobre.

22,334. Sapling, with Mauser bullet, cut at El Caney. Gift of Mr. Louis Brooks, Jr.

22,335. *Farol de Alarma*.—Pike and lantern, carried by the old city watch, *serenos*, in Santiago. Gift of the Museum of Santiago.

THE DWAMISH INDIAN SPIRIT BOAT AND ITS USE.

BY GEORGE A. DORSEY.

During the summer of 1898, I passed several weeks in and near Tacoma, Wash., for the purpose of securing specimens for the Department of Anthropology of the Field Columbian Museum. Good ethnological material proved on careful search to be very difficult to obtain, although from the Puyallup, Muckleshoot and Nisqually Reservations, many objects of interest were obtained. In addition to these three reservations I visited a number of small tribes of the Salish stock east of the foot of Puget Sound, all of them being more or less removed from the ordinary lines of travel. In company with George Leschi, a Puyallup Indian, I visited an exceedingly interesting band of Dwamish Indians dwelling on Cedar River. There I secured a complete set of objects, forming a so-called Spirit Boat, used by these and neighboring tribes in a very peculiar winter ceremony. From Cedar River we went by a most arduous and circuitous route to the east shore of Samamish Lake, where a small band of Samamish Indians was found, from whom were obtained additional objects used in the spirit boat. The parts of the boat itself, among these people, were in bad condition, and no attempt was made to secure them. During this journey, owing chiefly to the lack of time, I was not able to obtain any satisfactory account of the use of this boat.

On returning to Tacoma in June of 1900, I again secured the services of George Leschi and revisited the Cedar River tribe, where I was able to secure an additional series of objects comprising the spirit boat. Inasmuch as this set was a practical duplicate of the one which I had obtained on the previous visit, I forwarded the collection to the Free Museum of Science and Art, Philadelphia. At the same time I learned that the winter ceremony had also been performed

by the band at Samamish Lake, and that the set then used was intact. Encountering Dr. Boas the following week, I informed him of this fact, and under his direction one of the assistants of the American Museum of Natural History visited the village and secured the objects, which are now in the possession of the Museum in New York. For the sake of clearness, I shall describe only the set which is now in the possession of the Museum of the University of Pennsylvania, speaking first of the objects themselves, and then of the ceremony.

SPIRIT BOAT AND ACCESSORIES.

The paraphernalia used in the ceremony consists of three classes of objects: carved and painted slabs, which go to form the boat; carved and painted images, which are placed inside the boat; and long wands or poles used for the ceremonial propulsion of the boat. The objects forming the spirit boat are six in number. They consist of rough-hewn cedar planks averaging seven feet in height, sixteen to twenty inches in width at their widest part, and about one and a half inches in thickness. The base of these slabs is, to the extent of about twenty inches, so shaped that they may be readily set upright in the earth. This portion of the slab is not painted. The remainder of the slab is rudely carved, roughly representing, in shape, some water monster.

In four of the specimens one side only is decorated; in the other two specimens both sides are decorated, these being those which are placed at the forward end of the so-called boat. The painted surfaces are uniformly white, upon which have been painted various totemic or tomanious figures in black and red. The three colors were produced with a dry mineral paint and suffer damage upon the slightest provocation. Indeed, so likely were these colors to suffer effacement by means of even very slight friction, that it was necessary to protect the painted surfaces by enveloping them in cotton to prevent the total destruction of the figures on the journey to the East. The name given me of the slabs was Stlalcop-schudoptch.

As has been said, the general outline of all of the slabs is uniform. Each bears a snout-like projection at the upper



PLATE 64. Spirit Boat. Dwamish Indians, Cedar River, Washington. 37,683.

end, upon which is a series of short black lines upon a white ground, symbolic representations of the teeth of some cetacean. These lines or teeth vary in number from five in one pair of jaws to ten in another. Each slab also bears just below this head the representation of an eye; this is single in two of the slabs and double in the remaining four. The symbol is formed of a circle, from two sides of which radiate in diagonally opposite directions two sets of either three or four parallel lines. The center of the circle is in all cases, except one, occupied by a dot, which may represent the pupil of the eye. The color of the eye symbols is black throughout. The white body of each slab is outlined by a margin about an inch wide, of black, which extends entirely around the slab, terminating at the upper extremity in the representation of jaws by means of the addition of tooth-like representations, as has already been described. At the bottom of the slab, just above the V-shaped base which rests in the ground, is a black semicircular figure. The treatment of the other portions of the slabs varies somewhat in the different examples, and further details may be considered in the individual specimens.

In addition to the two eyes and other characteristics already referred to, the first board to be described (Fig. 1, Pl. 64) bears near the center the drawing in black of a large cetacean. The most striking feature concerning this figure is its open mouth, which, together with the representations of the teeth, bear a general resemblance to the configuration of the upper end of each slab. The name given me for this figure is *schudoptch*. Radiating from the upper part of the body of the figure are seven parallel rows of black dots, while downward and below the tail are two diverging lines of black dots. The meaning of these I was not able to learn. The reverse surface of this slab is undecorated.

On the second slab (Fig. 2, Pl. 64), near the center, is a comparatively small totem outlined in black, to which the name *schudoptch* is also applied, although my informant declared that this animal was, in its nature, half fish and half otter.

The third slab (Fig. 1, Pl. 65) bears in the centre a figure

in red which has a resemblance to the end of a dwelling-house. The name given me for this was *stalcoppiacabu*, meaning the Cedar-board people. Entirely surrounding the house are two rows of black dots, with a supernumerary row above and two below. There is no decoration on the reverse side of the board.

The symbolism portrayed on the fourth slab (Fig. 2, Pl. 65) represents a pair of roughly drawn birds with outstretched wings and open mouths, which face each other. These were said to represent a large bird which inhabits the nearby lakes and streams, and was called *swokut*. What was said to be a fish (*chebwhoop*) occupies a position equidistant between the birds, the mouths of which are open as if they were about to seize it. Extending along the front side of the wings of each bird, as well as along the upper and lower side of the back, is a number of rows of black dots.

The next slab to be described (Pl. 66) has both surfaces decorated. On one side (Fig. 1) is a house-like representation similar to that shown on Fig. 1, Pl. 65. To this was given the name *stalcop-shalatut*—the Cedar-board people. The reverse side of this slab (Fig. 2) bears a rudely drawn effigy of a man with outstretched hands, to which the name *Tseiak* was applied. Over the image is a semicircular-shaped drawing in black which was called *Allala-tseiak*—the home of *Tseiak*. There is but a single eye symbol on each side of this slab.

Perhaps the most interesting single slab is that shown in Pl. 67, which is figured on both sides. On one side (Fig. 1) are drawn, in addition to the eyes, two animals in black, with open mouths, long slender tails, and a pair of outstretched legs on each side of the body. The name applied to this animal was *wuwuhchudab*, which was said to be a small mud puppy. The two symbols just below, consisting of a circle, with a single line radiating out toward the edge of the board from each one, were said to represent an enlarged eye of the mud puppy. On the reverse side of this slab (Fig. 2) there is portrayed a human figure similar to the one represented in Fig. 2 of Pl. 66. This figure, however, was said to represent a female, and to it the name *skaquis* (shaman)

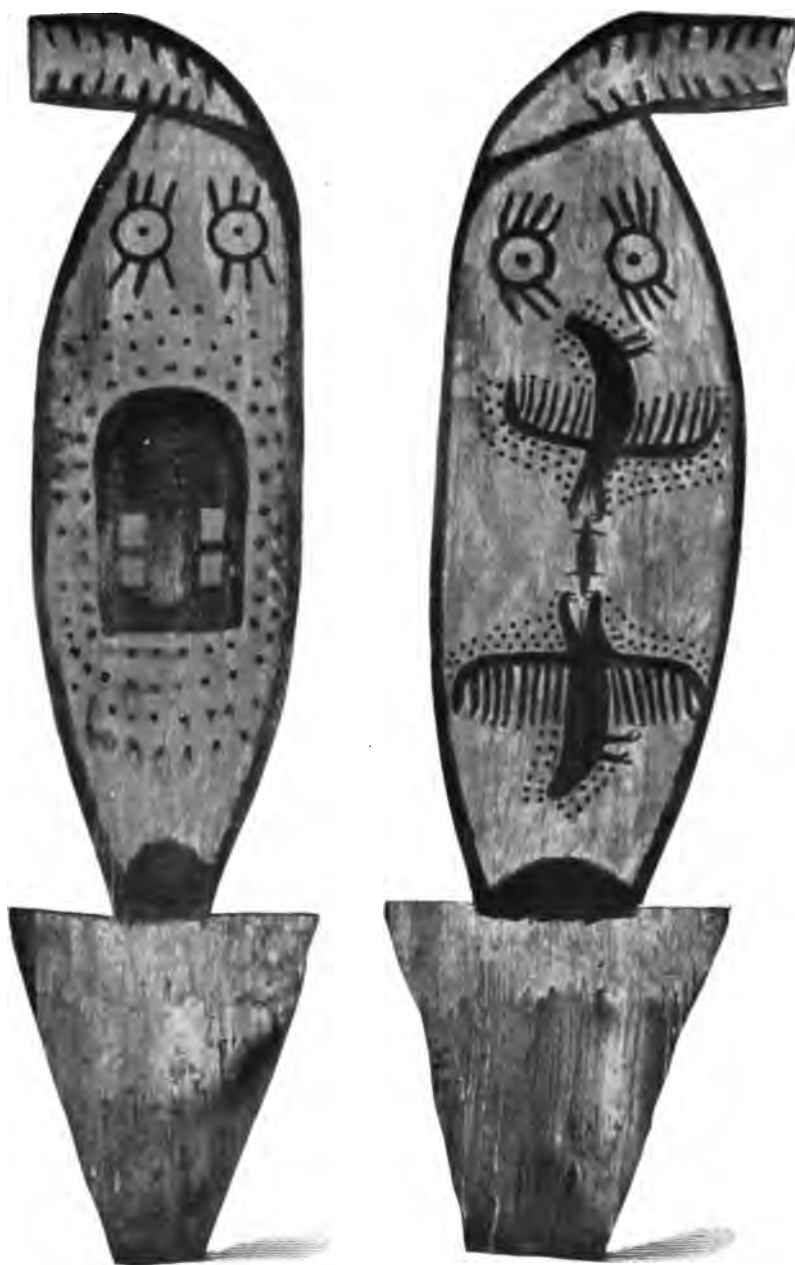


PLATE 65. Spirit Boat. Dwamish Indians, Cedar River, Washington. 37,683.



PLATE 66. Spirit Boat. Dwamish Indians, Washington. 37,683

was given. The figure bears in each hand a long cane or dancing wand (techted). Lying between these dancing wands and the body of the figure is, on each side, a row of black dots, the meaning of which was not determined. Extending from the body, but reaching down to a greater extent on each side, was a design similar to the one extending over the figure just mentioned, which, however, was said to represent a blanket and to which the name setsabp was applied.

Forming an intrinsic part of the ceremonial boat are always a number of small wooden images, two of which are figured on Pl. 68. These images vary in height from three to four and a half feet and are generally painted. There is in these two examples no attempt to portray the legs, the base of the figures terminating in a sharp round point which is thrust into the ground, thus holding the figure in an upright position. It will be noted that in the larger of the figures shown there is no indication of the arms; in the smaller figure, however, they have been drawn by means of curved red lines over the body of the figure, which has been painted black. On this same figure may be seen the two red dots which constitute the eyes. The mark for the nose has disappeared. The larger figure is entirely painted red and bears no marks for the features of the face or for the arms. The face is represented in both figures as a flat surface, broadest at the middle, the lines gradually converging above and below. The front surface of the body has the same general contour, although the back sides of both figures of the head and the body are well developed.

Inasmuch as these two figures can not be considered representative examples of the curious images which formerly played such a prominent part in the shamanistic rites of the people of Puget Sound, I shall give a brief description of some of the images in the Field Columbian Museum, which were secured on my former visit to Cedar River and Lake Samamish. One of the figures stands about four feet high and is unusually well made. The face is decidedly dish-shaped, but possesses a well-made nose in profile, a sunken mouth, a pair of eyes in black, and down both sides of the cheeks,

which are painted white, are red dots. About the neck is a wooden projection representing perhaps a collar. The hands are represented in relief, passing one above the other, from one side of the body to the other. The fingers are plainly indicated by means of deep incisions. The body, between the arms and the neck, is painted white with red dots. The lower surface is occupied by alternate bands of black, white and red paint. Around the head of this figure is a well-made band of cedar bark. The base is similar to the two already described.

Another figure stands three feet in height, and has a pair of arms in relief which drop down by the sides of the body to the elbows, the lower arms being brought back upon the breast along the median line. The nose is simply a continuation in the median line of the forehead, the face below this point being scooped out. The eyes and mouth are represented by means of slight excavations. About the neck is a band of cedar bark, one end of which hangs down on one side of the body nearly to the base. Another figure in the Field Columbian Museum is somewhat similar to this one, except that the arms are not represented at all, while the cedar bark ring in this case occupies a constriction which marks the termination of an unusually elongated neck. There are also five other figures obtained by me at Samamish Lake in 1898, which have about the neck and head, cedar bark rings.

Of a nature similar, no doubt, to the figure just described, is one in the Field Museum which was collected in 1891 by Mr. Eells, at one of the Puget Sound reservations. This figure bears evidence of great antiquity. The legs have disappeared, owing to decay, just above the knees. The remainder of the body is in a fair state of preservation, and measures three and a half feet in height, of which about one-half is occupied by the head. The face is ovoid in shape, coming to a rather sharp point at the chin and broadening out above a highly extended forehead, which at the summit is constricted and terminates in a three-inch roundish projection. The region of the eyebrows is painted black, with a slight incision just over them. The face below the forehead has been excavated to the extent of half an inch, leaving along the median line an elongated



PLATE 67. Spirit Boat. Dwamish Indians, Washington. 37,683.

but well-shaped nose. The eyes are unusually well formed by means of an elliptical excavation. The surface about the eyes and down to the end of the nose has been left slightly higher than the remaining portion of the face. In this, and just beneath the eyes are five parallel grooves opening out on the cheeks. The entire upper surface, including the nose, has been painted black. The mouth is formed by an elongated excavation. The arms extend downward free from the body with the hands resting on the hips. In front of each shoulder is a carving representing an eye, while just below, extending half way down to the elbow on the outer surface of the arms, are five deep parallel grooves. Extending inward from the eyes on the shoulders and meeting at the median line is a line in bold relief, while from the meeting-point there extends down on the breast the representation of a pendant. Extending upward just above this median line to the base of the chin is another raised line interrupted at intervals by deep incisions. Below the hips and extending across the outer surface of the legs are three deep parallel incisions.

Still another figure collected by Mr. Eells from the same reservation is of unusual interest. This figure is in perfect condition, and measures two feet six inches in height. The legs are entirely out of proportion to the remainder of the body, terminating in rather well-defined feet, in which the toes are plainly indicated. The arms hang free on each side of the body and rest upon the hips. Across the upper part of the body and extending from one arm to the other are irregular parallel grooves. The face is elliptical in shape, the portion just below the nose being perfectly flat and excavated to the extent of a quarter of an inch. This portion of the face is painted a dark red. The nose, which extends down from a prominent forehead, as in the figure just described, is unusually long and prominent. The flat cheeks have been painted yellow. Covering the entire forehead and back part of the head is a cedar bark wreath which extends down on each side of the head and shoulders. Over the broad portion of the breast is a small pendant made up of sections of deer-hoofs, which is suspended by means of a cord passing around the neck.

The third category of objects to be mentioned consists of the long dance-staffs, one of which is figured in Pl. 68. Although this pole is used only in this or similar ceremonies, the name applied to it is *touchtd*, which is the same term as that applied to the pole used by the Indians in propelling the canoe up stream. These staffs vary in length from four to eight feet and are well made. At one end they terminate in a long sharp point and are blunt at the other end. There is usually a slight constriction toward the upper end and about this is tied a string of cedar bark. Some of the poles in the Field Columbian Museum are flattened on one side, which is sometimes painted, so that they thus bear a superficial resemblance to an elongated and highly conventionalized image such as the two first described.

THE CEREMONY WITH THE SPIRIT BOAT.

So far as I am aware, the ceremony at which these objects are used has never been witnessed by any ethnologist, and as the ceremony has now become extinct, except in two localities, and as it is not often performed, it is possible that the opportunity to witness this interesting rite will not again be presented. While the information here given is fragmentary and must be regarded as highly unsatisfactory, yet it was obtained from the principal performer in the ceremony of the preceding winter, and so may be considered fairly trustworthy.

The occasion for the ceremony was the serious illness of the cousin of a well-known Dwamish shaman known throughout the neighborhood as Dr. Jack. Dr. Jack had used his utmost endeavor to restore health to this young man, but had not succeeded, and finally came to the conclusion that his spirit had departed to the under-world. He explained to me that the under-world was a region far off under the ground and to the north; that it was an exceedingly attractive place and was inhabited by the spirits of the deceased. *

* It is interesting in this connection to compare the following account of the abode of the dead from a valuable paper by Judge James Wickersham on "Nusqually Mythology" in the *Overland Monthly* N. S. Vol. 32, 1898, p. 346: "There was but one resort for the



PLATE 68. Spirit Boat. Dwamish Indians, Washington. 37,683.

This region, according to Dr. Jack, is especially delightful during the winter months, and it is only at that time that the spirit of the sick man leaves the body for this region. It was explained furthermore that during summer-time the spirit of the sick man does not desire to go to the under-world, but travels from place to place on the earth; that during the summer when the shaman is engaged in his pursuit of runaway spirits he was an entirely different person, permitting his own spirit to leave his body and traverse the neighborhood until

souls of the dead, and this spirit land was underground and not in the sky. The Squally-absch believed the world to be flat, and beneath its surface was the home of the dead, 'Otlas-skio.' Constant communication was maintained between this and the underground world by the spirits of the dead, as well as by the shamans or 'medicine men.' The country of Otlas-skio is filled with waving forests, grassy plains, and running streams. Villages after the ancient type occupy the most beautiful places; the woods are filled with game and singing birds, and brilliant flowers enliven the landscape and perfume the balmy air; the streams are filled with salmon, and it is indeed a happy hunting-ground, where the dead find all their friends and relatives. Here the soul of the dead passes an eternity in pursuit of the pleasures so dear on earth; the family is again formed; the wives and children gather around the hearth-fire, and the happiest period of the life on earth is resumed, never to be broken again by the pangs of separation and death.

"The soul of the dead person is called 'sli;' if a corpse is placed in a dead-house or box, a hole is always left for the escape of the soul. The spirit is thought by them to retain many of the attributes of the body. It has the power of speech, and is thought by them to be the very essence and shadow of the individual, preserving also in the ghostly form the exact shape of the dead person. George Leschi, a member of the tribe and a firm believer in the ancient faith, gave this statement regarding the soul and its possible separation from the body even before death: "You might be asleep and your father who is dead might come and get your soul and take it to where the dead stay across the river. Next day you would feel bad (sick) and grow worse, and finally die. The soul may be separated from the body. The tahmanaous man can steal the soul away from the body and kill the person."

"When the soul goes to Otlas-skio it enters the earth and goes downward; before reaching the abode of the dead it must cross a river, and a small object of value is often placed in the mouth to pay the ferryman, who waits on the bank with a ghostly canoe to ferry the soul across. Sometimes the ferryman is absent, whereupon the soul

he should find the object of his search. One of the favorite methods of compelling the spirit during the summer to return to the body is by singing. It was further explained that even the spirit of a man who had died during the summer did not go at once to this under-world, but wandered back and forth on the earth until winter was well advanced. *

As a consequence, then, of Dr. Jack's determination to make a visit to the under-world for the purpose of securing and compelling the return of the spirit of his cousin, he engaged the services of several other well-known doctors, viz.: Dr. Jim, Dr. Bill and a young man by the name of Dan, who was at that time undergoing various rites preparatory to becoming a shaman in full standing. These assistants were well paid by Dr. Jack, and each one was asked to prepare one of the slabs for the ceremonial canoe, and a date was set for the beginning of the ceremony. At the appointed time they gathered at the dance-house, an elongated structure with an earth floor, on the north bank of Cedar River. Here the slabs were placed in an upright position in two rows down the centre of the room, forming within a rectangular space measuring about ten by twenty feet. The slabs erected in this position are known collectively as swaush or canoe. The small painted wooden effigies or tahmanaous figures are then placed inside the "canoe" in an upright position, their bases being thrust into the ground.

Toward the afternoon the sick man was carried into the house and placed on a pallet in a corner. The invited guests and friends from the nearby settlements gathered around the sides of the long house and the four doctors took their places

returns to earth, re-enters the body and the person resumes life. It is thus that they explain a case of suspended animation "

* Dr. Jack told me that the spirit of this cousin had not gone voluntarily to the under-world on this occasion, but that the spirits of some deceased friends approached him unawares, and had taken his spirit with them to the other world. The idea which Dr. Jack meant to convey here he illustrated by forcibly snatching an object from the hand of an Indian sitting near by, signifying that the spirit of the sick man had been taken in the same way when he was least expecting it.

in the "canoe," each armed with a long pole. The ceremony began at sundown about the middle of January, as nearly as I could learn. The doctors began by singing, which was accompanied by the beating of rattles and drums by the friends of the invalid. At the same time the shamans began movements with the poles, as though they were propelling the boat. This kept up all night and by noon of the next day they were supposed to have entered the under-world, where the struggle for the possession of the spirit of the sick man began. Dr. Jack was very emphatic in his declaration that to compel the return of the spirit when once it became accustomed to the under-world was a very difficult matter; and that without the assistance of the small effigies or tahmanaous figures which accompanied them, it would be an impossibility. He admitted that the desire of his own spirit and those of his fellow-doctors to remain in the under-world was very great; but he explained that a man, to be a doctor, must possess an unusually strong will; otherwise, on his first attempt to rescue the spirit of a sick man in the under-world, he would not only be unsuccessful and consequently permit the sick man to die, but would die himself. He insisted further that there was a constant desire on the part of his spirit, knowing the beauties of this other world, to return, and, as he explained, he had very great trouble in prolonging life.

The struggle in the other world, so it was said, in this particular dance, lasted about a day and a half, at the end of which time they began the return journey, having been successful in their quest. At the end of the fourth day one of them signified to the spectators and friends of the sick man that they had been successful, when the sick man was lifted from his pallet and placed within the line formed by the upright slabs, that is, within the boat. The combined strength of the four doctors was then required to lift the spirit and place it on his body, where they finally forced it back into place. I was informed that the patient, from this time on, mended speedily and soon was restored to perfect health.

To obtain more definite and more accurate information concerning the names and uses of the objects above described

or to get a clearer understanding of the character of this under-world proved to be impossible owing to the few hours at my disposal and, indeed, such information as was obtained and as is here given was secured only with great difficulty. It is desirable that this ceremony be witnessed and studied in detail and that additional and more definite information as to it be secured before it is too late.

EVOLUTION IN ART. *

A. C. HADDON, F. R. S.

We find nearly all peoples not only decorate more or fewer of the implements they use in their daily life, but these objects themselves have a definiteness of form that appeals to us as being distinctly pleasing. A survey of ethnological specimens from a particular country or district at once demonstrates that there is a traditional type, or a limited number of traditional types, of forms for various objects in which often obscure and apparently meaningless details occur with considerable frequency. Further, there is a general uniformity amidst much seeming diversity in the style of the decoration and even in the very patterns themselves. This is so well recognized by ethnologists that competent students can usually tell where a given specimen was made.

It is a very interesting study to discriminate between the various schools of art of primitive peoples, but it is of much greater importance to endeavor to discover the significance of it all. It may now be accepted as abundantly proved that nothing is casual or accidental. There is a meaning for everything. To most people it is tedious to wander through extensive ethnological collections because the eyes are wearied by the multiplicity of detail and the mind dazed by the clueless maze. But how different is it when an interpretation is possible. Instead of the infinite analysis of ignorance, a synthesis becomes possible with knowledge, and the thoughts of the artificers reveal themselves in the work of their hands. Meaningless "curios" are transformed into specimens instinct with the working of the inner life of man. The dry bones not only live, they become possessed of a living soul.

All human activities pass through a cycle which, not inaptly, may be termed their life histories. We shall find this is usually also the case with ornamentation. A given

* A lecture delivered in the Free Museum of Science and Art, University of Pennsylvania, Nov. 6, 1901.

pattern has an origin, followed by a series of transformations, and either it disappears or sinks into the prolonged senility of simplicity. To illustrate these processes is one of the objects of this lecture; but in addition I desire to indicate some of the psychological reasons for these physical phenomena.

At the outset I must make it clear that I do not assert that all patterns have a dramatic life history; certain simple patterns, such as zigzags, may never have been anything else. Where, however, a sufficient series has been accumulated it is surprising how often what appears to be a very simple geometric design has a very different origin than that which would have been predicted for it. I should offer one other note of warning. The patterns or designs of which I am about to speak are the traditional ornamentation of more or less primitive peoples, and can be shown to be largely the result of an almost unconscious evolution. I do not deal with patterns and designs deliberately invented in modern schools of art; these belong to an entirely different category.

There is no difficulty in proving that transformations of designs do occur. I adduce an example published by my friend Mr. Balfour, of Oxford. A snail crawling on a twig was drawn by him, and this sketch was submitted to another person to copy, the copy by the second person was given to a third, and that of the third to a fourth person, in each case without giving a clue as to the subject of the drawing. You will see that after a short time the original was quite misinterpreted and the twig became metamorphosed into a bird, while the snail's shell was regarded as a boss on a bough. Any of you can prove in this way that slightly inaccurate copying will result shortly in a startling metamorphosis.

The same phenomenon has happened in the historic example, figured by Sir John Evans, of the gold stater of Philip II of Macedon. When the Gaulish and British minters copied this standard coin of the then civilized world, the grotesque results that ensued were due partly to lack of skill and partly to lack of appreciation of what was being copied.

But there are other causes which affect rigid adherence to the original of a design. The most common is due to

the technique. Man is limited not only by his skill and by his knowledge, but also by the material with which he has to deal. Any one who has done any plaiting or who has worked in other coarse textiles knows how the fabric limits the design. Take as an example a South American basket in which the curves of the snake can only be represented by angles. The human and animal representations on cotton cloths from Borneo illustrate the same principle.

The limitations of space curiously affect decoration. Earthenware is an easy material to decorate; the surface is smooth and, so far as style is concerned, enforces no restraint on the artist. The old Chiriqui Indians, as has been pointed out by Mr. W. H. Holmes of the National Museum, Washington, were very fond of depicting alligators on their earthen vessels, but instead of allowing plenty of room they often confined the alligators within restricted areas, and you can readily trace the degeneration that inevitably ensued. It is also probable that the character of the pottery designs has been considerably modified by the copying of designs in textiles.

I have previously stated that a very simple geometric design may have a very different origin than that which might have been predicated for it. On the baskets of the Salish Indians of N. W. America, as Dr. Farrand of New York has shown, we have flying geese; the rattle of the rattlesnake; flying birds; snake-tracks; flies, snake-tracks and arrow-heads; butterflies' wings; grouse-tracks. On painted boards in Central Brazil we have, according to Karl von den Steinen, pots; palmetto leaf; birds, and the simple article of clothing worn by the women. No one would suspect in these and in innumerable other innocent-looking patterns so many realistic originals.

I now wish to direct your attention to the reasons why people decorate objects, and in the slides that follow we shall find several additional illustrations of the principles I have so far enunciated.

The decoration of an object may appear at first sight a comparatively simple affair; but when we take into consideration the needs that constrain men to take this additional labor, we

very soon find that the reasons are very complicated, so much so that one cannot expect always to unravel them.

Despite the generally received dictum of "art for art's sake," it will generally be found among primitive peoples, as Dr. Hern points out, that some form of interest, personal, social, magical or religious, enters into what is regarded as disinterested æsthetic activity. In almost every case when the decorations of a tribe have been closely examined it has appeared that what seems to us as mere embellishment is for the natives full of practical non-æsthetic significance. The decorations possess unquestionable æsthetic value, but generally they have a distinct utility, and moreover are sometimes believed to be a necessity.

The exercise of the æsthetic sense not only gives the joy of action, but also the relief consequent on the expenditure of superfluous energy. It also enables the individual artist to convey to wider and wider circles of sympathisers an emotional state similar to that by which he is himself dominated. The social function of art has always been of tremendous importance in the evolution of man.

Before dealing with a few concrete examples of my thesis I wish to direct your attention to two important mental conditions that influence the decoration of objects.

The first of these is *suggestion*; a chance form or contour suggests a resemblance to something else, and from what we know of the conceptions of primitive people a mere resemblance is sufficient to indicate an actual affinity, and herein lie inexhaustible possibilities.

The second is *expectancy*. If a particular form or marking were natural to a manufactured object, the same form and analogous marking would be given to a similar object made in a different manner and which was not conditioned by the limitations of the former.

In the so-called axe of Montezuma II., carved out of a single piece of stone, we have represented the lashing by means of which the stone blade was secured to the wooden handle of the prototype. Bronze implements from the British Isles, exhibit similar tie-patterns. A cord pattern surrounds a bronze vessel from the Swiss lake villages, an

ebony comb from Assyria; a stone cornice from Egypt; a perforated bone needle from a Welsh tumulus, or the back of an ancient Swiss bronze knife. It is true that some of these ligature patterns were employed more for the reason of their being familiar, and for a feeling of a need for decoration than for any special appropriateness.

The forms assumed by twisted cords and knotted ropes as well as withy bands and strips of birch bark, have found their way into decorative art, especially in that of certain early peoples of Europe, the seafaring Scandinavians for example. Decorative features derived from leather work may be found on a stone cross in the Isle of Man, or widely scattered over savage Africa of to-day. The influence of basketry is ubiquitous. The bold plait patterns of interwoven bands, or fascinating, such as formed floors in the Swiss pile dwellings, is repeated on the bottom of a contemporary earthen vessel, or sandstone carving, or Roman stonework.

So deeply did this idea of interlacing penetrate the handiwork of artists that both men and beasts became involved in plaits and knots. Men and beasts that memorialised pagan myth and Christian legend were alike attacked by the plaited thong or twisted fibre, and the secular handicraft choked the religious idea. Such a hold had this technique on the mind of the people of Northern Europe that it predominated all their art and even led to the extinction of religious symbolism.

The remarkable American ethnologist, Frank Cushing, whose recent death we all deplore, has given a beautiful example of the effect of expectancy in the form and decoration of a clay vessel of the Iroquois which receive their explanation from being copied from bark vessels decorated with porcupine quills.

There is no need to illustrate further the hold expectancy has on the human mind. We experience a feeling of want if the rim of a plate is not provided with the customary pattern; even a line or two will serve to appease the sensation of lack of finish.

We may regard suggestion and expectancy as the dynamic and static forces acting on the arts of design. The former initiates and modifies, the latter tends to conserve what already exists.

It has been said that Art and Religion are sisters, and there is perhaps more to be said for this statement than its originator was directly conscious of. For the present purpose we may include under the term religion all those endeavors to act directly or indirectly upon the seen or the unseen by means of formulæ of various kinds; such formulæ may be pantomimic actions, pictographs, the spoken word or written phrases. When these are intended to act directly on natural objects we speak of them as magical; when they are employed to influence a spiritual power who is responsible for the attainment of the desired end we speak of the operation as truly religious in the restricted sense of the term. We also class as religious those ideas which have for their object the inculcation of the hope of a future life and the union of man with his god. In all these religious conceptions decorative art has played an important part amongst those people who had no means of spreading such ideas by means of a written language.

From two hemispheres will I gather examples of the use of decoration for purely magical purposes.

The Semang women of the Malay Peninsula wear decorated combs which are supposed to be prophylactic against invisible illnesses, such as fever; for injuries and wounds, other magical means are employed. The combs are not used for combing the hair and are inserted horizontally in the hair. The winds are supposed to bring these diseases, which the wind-demon as the agent of the thunder-god deposits by his breath on the forehead, whence it spreads over the body. The god Plé invented for the Semang the patterns on the combs, each of which is a specific for a particular disease. When several women go out together they make a selection of the combs they will severally wear; if the right comb is present the demon is arrested by the magical pattern and falls to the ground.

The handle of a typical comb is divided into eight transverse bands, each of which has its own name. The first and second bands are called respectively *was* and *pawer*, and these are the protecting figures whose magical power keeps off the diseases. They correspond with the scent and corolla of a flower. The broad central band is called *tin-weg*, which represents the

disease. If a mistake is made in the *was* or *pauer*, there is a danger that the disease may pass through. The young men who cut the combs for their sisters or future wives may be unskilled or not perfectly acquainted with the patterns. One mistake in the pattern does not necessarily do away with the efficacy of a comb, as a man once said: "It is like a gap in a bird trap: the bird can hop through, but it is always a question whether it sees the gap." The diseases for which the combs are effective attack women only, and these diseases the men say are mostly imaginary.

The men have magical engravings to protect them from various diseases and to produce rain, to protect the house from injurious animals; one helps women to catch fish and protects them from poisonous ones.

One device protects men against two forms of a skin-disease; one exhibits leprous white ulcers, the other hard knots under the skin. A. is the bank of a river in which frogs have sunk holes, some under water and some above. B., frogs' legs, denoting water. C. may mean several things, in this instance an ant-hill. D. Lianas on trunks, with ants running up and down. (1) bird; (2) butterfly; (3) caterpillars; (4) tree frog. E., tree with leaves, etc. Above E., C. is repeated; above this, the skin disease; the spots on the skin are supposed to look like melon seeds; these occur on the head, body and legs, hence the three rows. Lastly, fish scales are drawn to represent the leprous form of the disease; also in three rows for the head, body and legs. The dots represent the last incurable stage of the disease, when blood oozes out through holes; these seldom appear on the legs.

In the rain charm, the oblique lines represent the rain driven by the wind, the lines being the downpour and the dots the drops. The curved lines mean a storm. The double row of small ovals represent tortoise eggs as indicative of the water tortoise, a symbol of dampness. The central row is a fruit that ripens during the rainy season.

A magical device is seen on a paddle from Central Brazil. The circles are the ring-markings of a ray; then follow one kind of fish caught in a net and finally another kind of fish.

Perhaps the most wonderful æsthetic metamorphosis is

that of the Egyptian lotus, which with exuberant vitality luxuriated throughout the decorative art of Ancient Egypt. It was offered to their gods and depicted in most of their religious scenes; the long stems were twisted with flower buds and woven into some of the most beautiful patterns the world has ever seen, such as those on the tomb ceilings of the eighteenth dynasty, 1700 years B. C. The angled varieties of the effective quadruple scroll indicate that those patterns had been copied in textiles where the curves had perforce been angularised and the modified design retransferred to a surface that was capable of bearing any artistic form. The scrolls reach a high stage of excellence on the scarabs, only to break down into concentric circles in process of time.

The beautiful and virile art of the Pelasgians of the Mycenæan Period was influenced by the art of Ancient Egypt, as witnesseth the painted ceiling in Orchomenus, with its evident lotus motive. A Mycenæan grave carving and the golden ornaments of the same period prove what hold the spiral design had taken in Southern Europe, but further and yet further north it spread. Hungarian bronze swords can be matched with those of Scandinavia, and here again, as everywhere else in the world, spirals degenerate into concentric circles.

To cut a long story short, we find in Irish missals reminiscences of those spirals which had travelled afar through Europe. On textiles, ceramics and walls, we still find the old patterns peering at us through the ages, modified it may be in form and half smothered with modern phantasy.

What gave the lotus such a predominance in Egypt as to secure for it a ubiquitous immortality? The lotus was a well-recognized symbol of life, resurrection and immortality. At the beginning of the year it sprouted from its slimy bed and floated beautiful and pure on the surface of the waters. At sunrise the buds opened and studded the water with white or cerulæan asters, which closed when night fell. Every autumn it died its annual death only as a prelude to the vernal resurrection.

The intensely religious mind of the Ancient Egyptians was permeated with the problems of death and elevated by the

prospect of immortality. Resurrection and future bliss were articles of firm faith, not merely a pious hope. What wonder then, with this religious saturation of immortality, that the flower which symbolised the resurrection should be depicted in such profusion in their tombs and elsewhere ?

That phase of belief which is usually spoken of as Totemism is responsible for many delineations of animal and plant forms. I can but very briefly allude to the representations of their guardian animals so commonly made by the Indians of the North of America. Ancestral totems were carved on posts as memorials of relationship and descent. There is yet much to learn concerning Totemism, but whether totem representations were made for magical purposes, or as badges, or as ownership marks, or as memorials, they indicated the acknowledgment of a protecting power in some cases, and in all cases they inculcated the relationship of man with the useful or powerful objects and forces of nature. It was a recognition of the solidarity between the man and the not-man.

A higher stage than this was reached by the Polynesians, perhaps as a result of their superior social organization. Only very scarce vestiges of totemism are to be found among them, but instead we have a religion in the true sense of the term: a hierarchy of divinities who can be approached and influenced by man.

A good deal of attention has been paid to the beautifully carved symbolic adzes and paddles from the Hervey group in Eastern Oceania. Most of the ornamentation can be shown to be repetitions of degraded headless human forms; the simplification of serial trunks and limbs has led to strange metamorphoses, but there is no question as to the human motive of practically all these patterns.

Missionaries inform us that a significance is "invariably attached to ancient Polynesian carving." The stone adze head was itself considered as a god; even the fine plait of coconut fibre (or sinnet) with which the stone is fastened to the shaft was a god, and the method of binding it had been taught by the gods. Both during the operation of plaiting and of decorating the shaft, songs were sung in a low voice to the gods that they might further the work.

The figures which almost cover the handle of a Mangaian paddle or adze are obviously related to the female forms that are carved on the terminal of its shaft, and are morphologically derived from them by a process of evolution. These designs were called tiki tiki tangata. 'Tangate means man, or more accurately in this combination, "human." Tiki was the first man, and when he died ruled the entrance of the under world. Tiki tiki means spirits in succession or ancestors. The conclusion to be drawn is that tiki tiki tangata were the multitudinous human links between the divine ancestors and the chief of the living tribe. Thus the Polynesian artist proclaims the divine nature in man, his kinship with the gods themselves.

COLLECTIONS AND PUBLICATIONS.

AMERICA.

ALASKA.

The following objects collected in Alaska, while on board the U. S. S. Thetis in 1887 to 1889, have been presented by Lieutenant-Commander Miles C. Gorgas, U. S. N.

22,267. Two throwing spears, with long bone points, and three prongs bound to wooden shaft, from Herschel Island.

22,268. Three large spears, with bone heads fitted in wooden shafts, from north coast, near Point Barrow.

22,269. Two sea-otter arrows, with bone heads on wooden shaftments, from Shumagin Islands, south of the Aliaska Peninsula.

22,270. Bird arrow, with two bone prongs bound to wooden shaft, from the northeast coast of Alaska.

22,271. Arrow with bone point and wooden shaft, from the coast north from Point Barrow.

22,272. Two large spears, with bone heads and wooden shaftments, from the coast north from Point Barrow.

22,273. Bird spear, with three bone points and wooden shaft, from the coast north from Point Barrow.

22,274. Bird spear, with single bone point, from the coast north from Point Barrow.

A bone dagger (22,228), from the Tlinkit (Koluschan) Indians, has been presented by Mrs. Hampton L. Carson.

CANADA.

(NOVA SCOTIA.)

A throwing stick (22,238), from the Micmac Indians, at Digby, has been presented by Mr. Charles D. Clark. This object consists of a curved hickory rod, about 37 inches in length, Fig. 37, having a double cord with a running knot fastened at the upper end.

Mr. Clark states that some thirty years ago, when in camp in New Brunswick, an Indian cut a birch sapling and made a stick like this which he used in throwing stones. Last summer, when in Digby, he inquired of an Indian if he knew the throwing stick. The present specimen was made by this man. It is asserted that the Micmac can throw stones a distance of 600 yards by means of this weapon. Mr. Clark had seen them throw 250 yards. The throwing stick was formerly used by the Micmac in their tribal fights. At present it is only employed at festivals. They are very particular about the stones used.

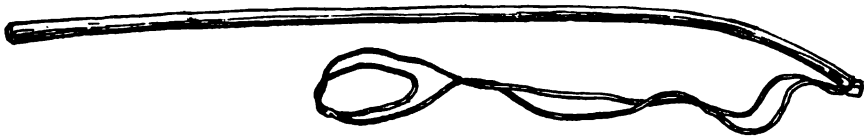


Fig. 37. Throwing Stick. 22,238. Length, 37 inches.
Micmac Indians, Nova Scotia

UNITED STATES.

Arizona.—A Pima Indian shield (22,242), collected by the donor in the Salt River Valley, Arizona, in 1888, has been presented by Mr. F. W. Hodge. The shield has a small hole, which the warrior from whom it was obtained said was made by an Apache arrow.

Two manos or upper stones for the matate (22,252-3), stone axe (22,254), mortar (22,255), two carved stones (22,256-7), and a boulder marked with diagonal lines (22,258), collected by Mr. Warren K. Morehead, in 1897, from ruins near Phoenix, Arizona, have been presented by Dr. A. H. Thompson.

Georgia.—A fish basket (22,260), and two fish traps (22,261-2), made by the Georgia negroes at Grovetown, have been presented by Dr. Roland Steiner.

New York.—A skull (22,251), from an Indian grave at Port Jervis, New York, has been presented by Mr. R. C. H. Brock.

Pennsylvania.—One hundred and eighty-eight flint chips (21,194), from McKee's Rocks mound, have been presented by Mr. Thomas Harper.

South Dakota.—A Siouan conjurer's hoop, *cangleska*, and sticks (22,241), from the Ogalala Sioux of Eagle's Nest Camp, ~~Pine~~ Ridge Agency, have been presented by Mr. Louis L. Meeker.

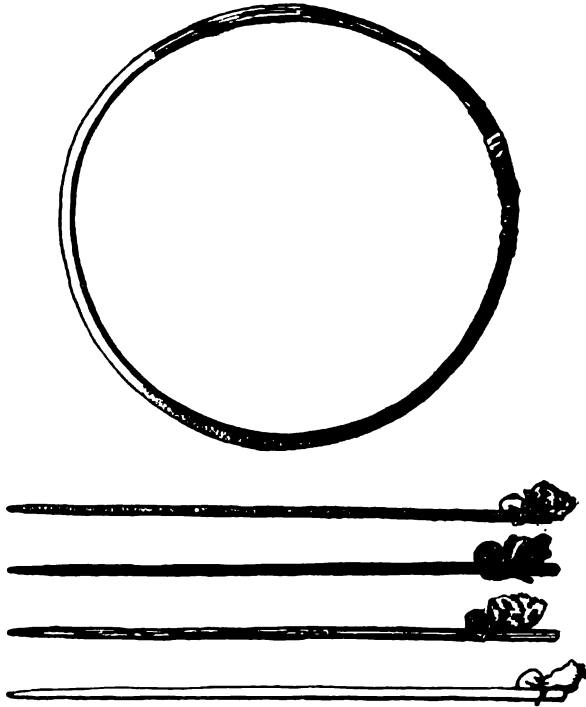


Fig 38. Conjurer's Hoop and Sticks 22 241. Diameter, 10 inches.
Ogalala Sioux, South Dakota.

The hoop, *cangleska*, "spotted wood," consists of a peeled branch about half an inch in diameter, tied with sinew to form a ring ten inches in diameter, and painted in four segments: yellow, red, blue and black. It is accompanied by four sticks, 11½ inches in length, painted like the hoop, one yellow, one red, one blue and one black. A small calico bag, painted to agree with the stick and containing tobacco is tied at the blunt end of each stick.

These objects were made for Mr. Meeker by Cangleska Luta or Red Hoop, an Indian of mixed Cheyenne and Kiuksa Ogalala parentage.

Mr. Meeker has furnished the following account:

According to Indian belief the hoop represents the ecliptic or zodiac, or, as the Indians would say, the circle of day and night. The yellow segment represents the part between the eastern horizon and the zenith, over which the sun seems to pass from sunrise to noon.

The red segment represents the part between the western horizon and the zenith, over which the sun seems to pass from noon to sunset.

The blue represents the part from the western horizon to the nadir, the supposed course of the sun from sunset to midnight.

The black represents the part from the nadir to the horizon, the supposed path of the sun from midnight to sunrise. The colors ordinarily used are yellow from the juice of the prickly poppy, red from blood or red clay, blue from blue earth, and black from charcoal. Each color represents a quarter of the globe, or, as an Indian would say, the colors denote the places of the four winds. If the hoop is set up perpendicularly, with the juncture of the red and yellow above, the former to the west and the latter to the east on the plane of the ecliptic, each color will be in its proper position, as above described.

If the hoop is laid upon the ground in a horizontal position, with the juncture of the yellow and red to the north, it will give each of the four winds its proper color: from north to east will be yellow; east to south, black; south to west, blue; and west to north, red.

Each stick belongs to one of the four winds, as indicated by its color. In case of sickness, the hoop, sticks and tobacco borne by the sticks are offered in the following manner to secure recovery: the hoop is laid in the centre of the lodge, or on the ground, in the position described above. The performer takes each stick and sets it upon its color on the hoop, point down, at the same time chanting the syllables *he* and *e*, *he e*, *she*, and *e e*, with or without improvised words of his own, relating to morning or forenoon, *hanhanna*; dawn, *anpao*; noon, *wicokala*; evening, *htayetü*; midnight, *hancokaya*, and *tate*, wind, with or without the name of the color of the stick: *zi*, yellow; *sa*, red; *to*, blue, and *sapa*, black.

CHANT.

Hi ya ye, hi ye ye, hi ya ye, ya-hi ye ye.
Hi ya ye, hi ye ye, hi ya ye, ya-hi ye ye.

Hi ya ya, hi ye ye, hi ya ye, ya-hi ye ye.
Hi ya ya, hi ye ye, hi ya ye, ya-hi ye ye.

IMPROVISATION.

Ta te zi, hi ya ye, ta te sa, ya-hi ye ye.
Ta te to, hi ye ya, ya hi ye, ta-te sa pa.

An pa o, hi ya ya, han han na, wi-co ka la.
Hta ye tu, hi ya ya, ya hi ya, han-co ka ya.

Both chorus and improvisations are repeated and continued at pleasure. The scale is in a minor key and the chant rises and falls, beginning low, becoming higher, and again low. The pupils in the school say the syllables *hi ya ye* and *hi ye ya* are correctly rendered in English by the kindergarten chorus. "Hence this way, hence that way." I believe, however, that "Hence this one, hence that one," is more nearly correct, if indeed they have any meaning. Most Indians say they have none.

Two of the sticks thus laid across the hoop are from north to south; the others from east to west. A light colored stick is laid from north to south, and a light colored one east to west, either red or black or yellow and blue. If red and blue are used and recovery does not take place, red and black will be used when the ceremony is repeated. The other two sticks are held in the hand of the performer, who continues to chant *he* and *e* with variations until well-nigh exhausted.

The hoop and sticks are then carried away and left on some hill as far away from all forms of animal life as possible.

According to their explanation, the Indians believe the four winds carry incense to the four powers of the universe. The efficacy of the rite is supposed to depend upon the mysterious power of the performer, the weirdness and length of the chant and the height and solitude of the place where the offering is left. Remains of these hoops may be found on the top of remote and lonely hills in every Indian community where I have been stationed.

The account here given describes the most common use of the hoop. I have learned that it is used in many ceremonies by the medicine men. In July last, I saw one of the hoops, and supposed it was used in a game. Evasive answers were given to my inquiries, but there was a young man on his death-bed, and month after month many hoops were required. In order to obtain coloring matter for them it was at last admitted that the hoops were for the benefit of the invalid, and I at last saw the performance, which took place at night. The Indians are unwilling to tell of their customs, partly because the medicine men do not approve, and partly because they do not care to have their sacred customs made the object of ridicule.

Allen, South Dakota, June 30, 1901.

PORTO RICO.

A carved head of a saint (22,184) has been presented by Mr. R. C. H. Brock.

ASIA.

THE FAR EAST.

CHINA.

An inlaid teak wood table (22,250) has been deposited by Mr. Joseph Wright.

JAPAN.

A folding fan, with paper leaf, (22,247), of the kind called *chiu kei*, "half open," used by Shinto priests in the temple and by nobles when on a journey, from Kiyoto, has been presented by Mrs. Helen Abbott Michael.

A rain-coat (22,183), *mino*, has been presented by Mrs. William Frishmuth.

INDIA.

Twelve painted clay images (22,204-15), representing trades and castes, have been presented by the Hon. Robert Adams, Jr.

MELANESIA.

Gilbert Islands.—A sword or dagger (22,232), set with shark's teeth, twenty-five inches in length, has been presented by Mrs. Hampton L. Carson.

AFRICA.

A hide bottle for antimony (*kohl*), (22,248), from the kingdom of Porto Novo (French Colony of Dahomey), has been presented by Mr. A. Salles. The races here are the Djedjs and Nagos, the Djedjs being the dominant power.

The following objects from the Fans of the Ogove River, collected by the Rev. Robert E. Nassau, have been presented by Dr. Thomas G. Morton.

22,220. Drum of soft wood, made of a hollow log, ornamented with carved and burned designs; one end covered with hide. It is held between the knees and beaten with the fingertips or knuckles, or very short sticks.

† 22,221. Mask of soft wood, painted white and burned. Length, 16½ inches. Formerly used only by fetich-doctors to disguise themselves in their incantations. Now used also in comic dances.

22,222. Idol. Female figure, carved, painted and burned like preceding. Length, thirty-one inches. A model.

22,223. Whip of hippopotamus hide, used to whip women and slaves. Length, forty-five inches.

An Ashantee medicine man's staff (22,285), of carved wood, has been presented by Dr. S. Weir Mitchell.

SPECIAL COLLECTIONS.

American History.—The maul stick of John Neagle (22,263), the sword-cane of Thomas Sully (22,264), and the cane of Gilbert Stuart have been presented by Mr. John Neagle.

An American fan, caricature portrait of Horace Greeley (22,259), has been presented by Mr. Amos Bonsall.

A pair of spectacles (22,245), eighty years old, has been presented by Dr. Morris Jastrow, Jr.

Fans.—Mrs. Joseph Drexel has made the following additions to her collection:

22,280. Spain, Nineteenth Century. Folding fan with swan-skin leaf, painted with "The surrender of Breda," after Velásquez. Ivory sticks. Purchased in Havana.

22,281. France, Eighteenth Century. Circular horn fan, *brisé*, with sticks decorated in floral designs.

22,282. France, Eighteenth Century. Horn fan, *brisé*, with carved and gilded sticks.

22,283. France, Eighteenth Century. Horn fan, *brisé*.

22,284. France. Eighteenth Century. Horn fan, *brisé*, with sticks gilded and painted in floral designs.

Games.—A set of gambling sticks (22,182), from the Mohave Apache Indians, Yavapai County, Arizona; five gambling sticks (22,185), from the Northwest Coast of America; a set of counting sticks (22,186), used by the Amelicate Indians of New Brunswick; a set of four beaver-teeth dice (22,226); a set of seven bone dice (22,225), and two buckskin bags for dice (22,224); the dice and bags, probably Arapaho, have been deposited by Mr. George E. Starr.

A paper sheet for the game of *Oca* (22,249), from Italy, has been presented by Dr. H. Carrington Bolton.

An implement for "cup and ball" (22,137), made of olive wood, and purchased at Bellagio, Italy, has been presented by Miss Mary W. Bonsall.

A set of nicker reeds (*Cisalpina Bonduc.*), (22,246), for the game of *wari*, from Barbadoes, W. I., has been presented by Mr. M. F. Lobo.

Two cardboard puzzles (22,243-4) have been presented by Mr. David Rinkes.

Musical Instruments.—Four sets of cane Pan pipes (22,233-36), called "quilles," made by the negroes at Grovetown, Georgia, have been presented by Dr. Roland Steiner.

A portrait of Mrs. William Frishmuth (22,279), painted by Mr. Thomas Eakins, has been deposited by the artist.

LECTURES.

A course of free public lectures, illustrated by objects in the Museum and by lantern slides, has been delivered in the Widener Lecture Hall of the Museum, as follows:

November 6.—Dr. Alfred C. Haddon, F. R. S., University of Cambridge, England, "Evolution in Art."

November 11.—Dr. Alfred C. Haddon, F. R. S., University of Cambridge, England, "The Decorative Art of Primitive People."

November 20.—Prof. William H. Goodyear, Curator, Brooklyn Institute of Arts and Science, "The Lotus Form in Art."

November 27.—Mr. Stewart Culin, "The Archaeology of Cuba."

December 4.—Mr. Harlan I. Smith, American Museum of Natural History, New York, "The Archaeology of Michigan."

December 11.—Mr. Stewart Culin, "Archaeological Notes on the John Wanamaker Expedition of 1901."

December 18.—Dr. J. Walter Fewkes, U. S. Bureau of American Ethnology, Washington, D. C., "The Cliff Dwellers and their Relations."

LIBRARY.

The following are among the most important acquisitions since the last issue of the *BULLETIN*:

Das Tonalamatl der Aubin'schen Sammlung. Eduard Seler. Berlin, 1900.

Codex Fejérváry-Mayer. Manuscrit mexicaine précolombien des Free Public Museums de Liverpool. Publié en chromophotographie par Le Duc de Loubat. Paris, 1901.

Codex Fejérváry-Mayer. Erläutert von Dr. Eduard Seler. Berlin, 1901.

Gifts of the *Duc de Loubat*.

Johan Campanius' Catechism. Stockholm (1696).

Gift of *Mr. R. C. H. Brock*.

Certain aboriginal remains of the Northwest Florida Coast. Part I. Certain Aboriginal Remains of the Tombigbee River. By Clarence B. Moore. Philadelphia, 1901.

Gift of the *Author*.

The Cliff Dwellers of the Mesa Verde. By G. Norden-skiöld. Stockholm, 1893. By purchase for the *Brinton Library*.

The works named below relating to Cuba and the West Indies, collected in Cuba in the summer of 1901 by Mr. Culin, have been presented by *Mr. R. C. H. Brock*.

Colección de Documentos Inéditos relativos al descubrimiento, conquista y colonización de las posesiones Españolas en America y Oceania, sacados, en su mayor parte del Real Archivo de Indias. Vols. 1-41. Madrid, 1864-84.

Revista de la Habana. Vols. 1-5. 1853-6. Second series, Vols. 1-4. 1856-7.

La Habana, publicación quincenal. Vols. 1, 2. Habana, 1858-9.

Revista de Cuba. Periódico quincenal de Ciencias, Derecho, Literatura y Bellas Artes. Vols. 1-14. Habana, 1877-83.

Revista Cubana. Periódico Mensual de Ciencias, Filosofía, Literatura y Bellas Artes. Vols. 1-18, 20. Habana, 1885-93, 1894.

- Revista de España, de Indias y del Estranjero, v. 6.
- Informe sobre el censo de Cuba, 1899. Washington, 1900.
- Annual report of Major-General Leonard Wood, U. S. V., commanding Division of Cuba. 2 vols. Havana, 1900.
- Report of William H. Carlson, Special Commissioner of Railroads, to Major-General Leonard Wood, Military Governor of Cuba. Baltimore, 1901.
- Primer Congreso Medico Regional de la isla de Cuba, celebrado en la Habana en Enero de 1890. Habana, 1890.
- A Manual for the Third Pan-American Medical Congress, to be held in the city of Havana, Cuba, February 4, 5, 6, 7, 1901. Havana, 1901.
- Bachiller y Morales, Antonio: Cuba Primitiva, Origen, Lenguas, Tradiciones é Historia de los Indios de las Antillas Mayores y las Lucayas. Ed. 2. Habana, 1883.
- Bachiller y Morales, Antonio: Cuba; Monografía Histórica, que comprende desde la Perdida de la Habana hasta la Restauración Española. Habana, 1883.
- De la Torre, Carlos: Manual ó Guia para los Exámenes de los Maestros Cubanos. V. 1, Historia; V. 2, Geografía. (Biblioteca del Maestro Cubano.) Habana, 1901.
- De la Torre, José Maria: Mapa Histórico-Pintoresco Antiguo de la isla de Cuba, 1847.
- De la Torre, José Maria: Mapa Histórico-Pintoresco Moderno de la isla de Cuba, 1848.
- Ferrer, Miguel Rodríguez: Naturaleza y Civilización de la grandiosa isla de Cuba, ó estudios variados y científicos, al alcance de Todos, y otros históricos estadísticos y políticos. 2 pts. Pt. 1, Naturaleza; Pt. 2, Civilización. Madrid, 1876-7.
- Pi y Margall, Francisco: Historia general de América desde sus tiempos más remotos. 2 vols. Barcelona, 1888.
- Pichardo, Estéban: Diccionario Provincial casi Razonado de Vozes y Frases Cubanas. Ed. 4. Habana, 1875.
- Reynoso, Alvaro: Agricultura de los Indígenas de Cuba y Haiti. Paris, 1881.
- An Almanack for 1901 with a Guide to the Bahamas, customs tariff, directory, etc. Nassau, New Providence.

EXCHANGES.

An exchange of publications has been made with the following institutions (in addition to those already noted) since the last issue:

Carnegie Library, Pittsburg, Pennsylvania.

Anthropological Institute of Great Britain and Ireland,
London, England.

South Kensington Museum, London, England.

R. Accademia dei Lincei, Rome, Italy.

Australian Museum, Sydney, N. S. Wales.

NEW MEMBERS OF THE DEPARTMENT OF ARCHAEOLOGY.

The following have been elected to membership in the Department of Archaeology of the University of Pennsylvania since the last issue of the BULLETIN, and since July 13, 1901, down to December 31, inclusive.

Bailey, Mr. Geo., Jr.	Johnson, Mrs. E. R.
Belfield, Mr. T. B.	Jones, Mr. D.
Burpee, Mr. W. A.	
	Ladd, Mr. Chas. E., Portland, Ore.
Chandler, Mr. H. L.	Lauterbach, Mr. E., New York.
Chase, Mr. Simeon B., Fall River, Mass.	Linden, Mr. Rob. P.
Clingan, Mrs. C. B., Bridesboro, Bucks County, Pa.	Lowden, Mr. Frank, Chicago, Ill.
Colton, Mr. Milton, Jenkintown, Pa.	Mann, Mrs. Wm. J.
Craig, Mr. N. B.	Metheny, Dr. D. G.
Crawford, Mr. A. W.	Milliken, Mr. A. C., Pottsville, Pa.
Crouter, Mr. A. L. E., Mt. Airy.	Mintzer, Mr. Wm., San Francisco.
	Monroe, Mr. Josiah
	Morris, Mr. Geo. S., Olney, Pa.
Davis, Mr. John L.	Oberteuffer, Mr. R. M.
Derr, Mr. A. F., Wilkesbarre, Pa.	
Dodge, Mr. W. E., New York.	Packard, Dr. F. A.
Dulaney, Mr. Benj. L.	Pancoast, Mr. Charles E.
	Partridge, Mr. Chas L., Redlands, Cal.
Fairchild, Mr. Charles S., New York.	Pratt, Mr. Trimble, Media, Pa.
Fleer, Mr. Frank H., Lansdowne, Pa.	Prince, Mr. J.
Fleisher, Mr. Penrose	Schlatter, Mr. K.
Frechie, Mr. A. M.	Simpers, Thos. W.
	Slaughter, Mr. Chas. H. P.
Gorman, Mr. W.	Stow, Mr. Edgar D.
Greene, Mr. Jacob L., Hartford, Conn.	Swift, Mr. Wm. H., Wilmington, Del.
Gunther, Mrs. E. S.	
	Taylor, Mr. Nathan A.
Hackett, Mr. S. H.	Thodorovich, Mr. Theo. C.
Haines, Mr. C. F.	Thomas, Rev. Nathaniel
Hardart, Mr. Frank.	Tidball, Rev. Thos. Allen
Hetzel, Mr. Geo. C., Ridley Park, Pa.	
Hoskins, Mr. C. W., New York.	Van Court, Mr. H. G.
Howard, Mr. P. E.	
Huey, Mr. W. C.	Weston, Mr. Francis E., Upland, Pa.
	Whiteman, Mr. J. G.
Jackson, Mr. Newton	Wolverton, Hon. S. P., Sunbury, Pa.
Jocis, Mr. Antanas A.	

FREE MUSEUM OF SCIENCE AND ART,

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UNIVERSITY OF PENNSYLVANIA.

BULLETIN—Vol. III, No. I.

JANUARY, 1901.

CONTENTS.

	PAGE.
A SUMMER TRIP AMONG THE WESTERN INDIANS. (The Wana- maker Expedition.) Chapter I. <i>Iowa: Sac and Fox; Wyom- ing: Jasper Quarry, Wind River Reservation, Shoshoni and Arapaho</i> Stewart Culin.	3
OGALALA GAMES Louis L. Meeker.	23
COLLECTIONS AND PUBLICATIONS:	
AMERICA	47
GREENLAND	47
CANADA	47
UNITED STATES: <i>Arizona, Arkansas, Georgia, Illinois, Massa- chusetts, New Mexico, New York, Pennsylvania, South Carolina</i>	47
MEXICO	49
CENTRAL AMERICA: <i>Guatemala, Nicaragua, Costa Rica</i> . . .	49
SOUTH AMERICA: <i>Peru</i>	51
ASIA. THE FAR EAST: <i>China, Japan</i>	51
INDIA	52
BURMA	54
ISLAND ASIA: <i>Philippine Islands</i>	55
POLYNESIA: <i>Hawaii, Samoa</i>	55
AFRICA	56
SPECIAL COLLECTIONS: <i>Fans, Fire Making and Lighting, Games, Musical Instruments, Numismatics</i>	58
LECTURES	64
LIBRARY	65
EXCHANGES	68
NEW MEMBERS OF THE DEPARTMENT OF ARCHÆOLOGY	i-iii

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PHILADELPHIA.

1901.

THE object of this Bulletin is the publication of new material acquired by the Museum of Science and Art of the University of Pennsylvania, with accounts of explorations conducted by the Museum and original investigations based upon its collections. The subscription price is One Dollar per year (four numbers).

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